HT-SL5/SL5A

SERVICE MANUAL

Ver 1.0 2002. 07

- HT-SL5/SL5A are composed of following modes.
  As for the service manual, it is issued for each component model, then, please refer to them.

Canadian Model
HT-SL5A

AEP Model
UK Model
HT-SL5

E Model
HT-SL5A

COMPONENT MODEL NAME

HT-SL5	HT-SL5A
STR-KSL5 (FM STEREO FM-AM RECEIVER)	TA-KSL5 (INTEGRATED STEREO AMPLIFILER)
SA-WMSP3 (SUBWOOFER SPEAKER)	SA-WMSP2 (SUBWOOFER SPEAKER)
SS-CRP2	
SS-CNP2 (CENTER SPEAKER)	SS-MSP2 (FRONT, SURROUND SPEAKER)

- Abbreviation
  MX : Mexican model

PARTS LIST

Part No.	Description	Remarks
	ACCESSORIES	
	**********	
1-477-423-11	COMMANDER, STANDARD (RM-U25)	
1-501-594-13	ANTENNA (FM)	
1-501-721-22	ANTENNA (LOOP)	
1-751-347-11	CORD, CONNECTION (10m) (FOR SPEAKER)	
1-751-598-52	CORD, CONNECTION (PIN-PIN) (MONAURAL CORD)	
1-769-433-61	CORD, SPEAKER (3.5m)(FOR SPEAKER)	
⚠1-770-019-51	ADAPTOR, CONVERSION PLUG (UK)	
1-823-135-12	CORD (CONNECTION) (COAXIAL DIGITAL CORD)	
3-071-119-51	COVER,BATTERY (FOR RM-U25)	
4-235-133-01	FOOT (FOR SS-CNP2/MSP2)	
4-235-237-01	FOOT (FOR SA-WMSP2/WMSP3)	
4-241-634-11	MANUAL, INSTRUCTION (ENGLISH) (AEP,UK)	
4-241-634-21	MANUAL, INSTRUCTION (FRENCH,GERMAN,SPANISH,DUTCH) (AEP)	
4-241-634-31	MANUAL, INSTRUCTION (SWEDISH,ITALIAN,POLISH) (AEP)	
4-241-635-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH) (CND)	
4-241-635-21	MANUAL, INSTRUCTION (SPANISH) (MX)	
4-241-650-11	MANUAL, INSTRUCTION (PORTUGUESE) (AEP)	
4-241-650-21	MANUAL, INSTRUCTION (DANISH,FINNISH) (AEP)	
4-241-650-31	MANUAL, INSTRUCTION (RUSSIAN) (AEP)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

HOME THEATER SYSTEM

9-874-084-01
2002G1600-1
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http://getMANUAL.com

SS-CNP2/CRP2/MSP2

SERVICE MANUAL

Ver 1.0 2002. 02

US Model
Canadian Model
AEP Model
UK Model
E Model

SS-CNP2 SS-MSP2

- SS-CRP2 is the speaker section in HT-DDW740/DDW840.

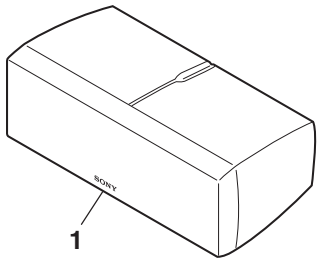
- SS-CRP2 is composed of following models.

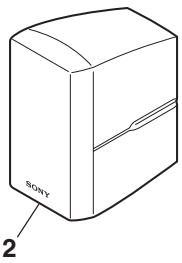
SS-CRP2	
FRONT and SURROUND speakers	SS-MSP2
CENTER speaker	SS-CNP2

SPECIFICATIONS

Speaker system	Full range, magnetically shielded
Speaker units	70 mm 100 mm cone type
Enclosure type	Bass reflex
Rated Impedance	8 ohms
Power handling capacity (Maximum input power)	100 W
Sensitivity level	85 dB (1 W, 1 m)
Frequency range	160 Hz – 20,000 Hz
Dimensions (w/h/d)	
SS-MSP2	Approx. 81 141 121 mm (3 1/4 5 5/8 4 7/8 inches)
SS-CNP2	Approx. 230 81 121 mm (9 1/8 3 1/4 4 7/8 inches)
Mass	
SS-MSP2	0.8 kg (1 lb 13 oz)
SS-CNP2	1.0 kg (2 lb 4 oz)

EXPLODED VIEW AND PARTS LIST





Ref. No.	Part No.	Description
1	A-4467-568-A	OVERALL ASSY (SILVER) (SS-CNP2)
1	A-4467-806-A	OVERALL ASSY (BLACK) (SS-CNP2)
2	A-4467-570-A	OVERALL ASSY (SILVER) (SS-MSP2)
2	A-4467-805-A	OVERALL ASSY (BLACK) (SS-MSP2)

SPEAKER SYSYTEM

9-873-476-01
2002B1600-1

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REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002.02	New

STR-KSL5

SERVICE MANUAL

AEP Model
UK Model

Ver 1.0 2002. 07

• STR-KSL5 is the receiver section in HT-SL5.

Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

SPECIFICATIONS

Amplifier section

POWER OUTPUT
Rated Power Output at Stereo mode
(8 ohms 1 kHz, DIN) 25 W + 25 W

Reference Power Output
(8 ohms 1 kHz, THD 10 %)
Front[1]: 35 W/ch
Center[1]: 35 W
Surround[1]: 35 W/ch

1) Depending on the sound field settings and the source, there may be no sound output.

Frequency response
MICRO SP.: 150 Hz – 50 kHz
–3/+0.5 dB
150 Hz (6 dB/oct)
Low cut Filter ON
NORMAL SP.: 10 Hz – 50 kHz
–3/+0.5 dB (with sound field and tone off)

Inputs (Analog) Sensitivity: 250 mV
Impedance: 50 kilohms
S/N[2]: 96 dB
(A, 250 mV[3])

2) INPUT SHORT.
3) Weighted network, input level.

Inputs (Digital)
DVD (Coaxial) Sensitivity: –
Impedance: 75 ohms
S/N: 100 dB
(A, 20 kHz LPF)

DVD, TV/SAT (Optical) Sensitivity: –
Impedance: –
S/N: 100 dB
(A, 20 kHz LPF)

Sampling frequency
COAX, OPT 96 kHz

Outputs
LINE (SUB WOOFER) Voltage: 2 V
Impedance: 1 kilohms

Video section

Inputs
Video: 1 Vp-p, 75 ohms

Outputs
Video: 1 Vp-p, 75 ohms

FM tuner section

Tuning range 87.5 – 108.0 MHz

Antenna terminals 75 ohms, unbalanced

Intermediate frequency
10.7 MHz

Sensitivity Mono: 18.3 dBf,
2.2 µV/75 ohms
Stereo: 38.3 dBf,
22.5 µV/75 ohms

Usable sensitivity 11.2 dBf, 1 µV/75 ohms

S/N Mono: 76 dB
Stereo: 70 dB

Harmonic distortion at 1 kHz
Mono: 0.3%
Stereo: 0.5%

Separation 45 dB at 1 kHz

Frequency response 30 Hz – 15 kHz
+0.5/–2 dB

Selectivity 60 dB at 400 kHz

AM tuner section

Tuning range 531 – 1602 kHz

Antenna Loop antenna

Intermediate frequency
450 kHz

Usable sensitivity 50 dB/m (at 999 kHz)

S/N 54 dB (at 50 mV/m)

Harmonic distortion 0.5% (50 mV/m, 400 Hz)

Selectivity At 9 kHz: 35 dB

General

Power requirements 230 V AC, 50/60 Hz

Power consumption 110 W

Power consumption (during standby mode)
0.5 W

Dimensions (w/h/d) 430 × 63 × 289 mm
including projecting parts and controls

Mass (Approx.) 4.6 kg

Design and specifications are subject to change without notice.

HOME THEATER SYSTEM

9-874-108-01
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Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1
GENERAL

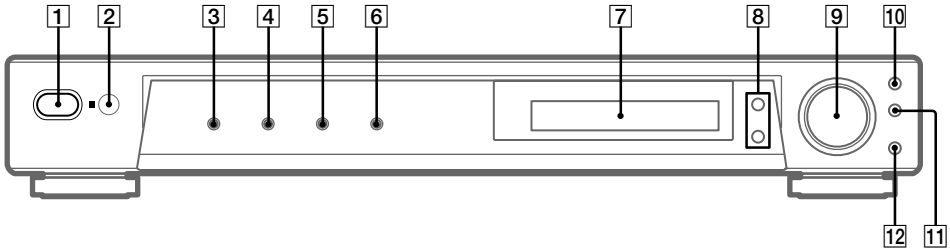
This section is extracted from instruction manual.

Parts Identification

The items are arranged in alphabetical order.

Refer to the pages indicated in parentheses ( ) for details.

Main unit



Display 7 (20)
DVD 4 (17)
IR receptor 2
MASTER VOLUME 9 (17)
MUTING 12 (17)
PLII 10 (19)
PRESET TUNING +/– 8 (24)
SOUND FIELD 11 (18, 21)
TUNER 6 (17, 23, 24)
TV/SAT 5 (17)
VIDEO 3 (17)
I/⏻ (power) 1 (12, 16, 17, 22)

SECTION 2
TEST MODE

FACTORY SET MODE

* All preset contents are reset to the default setting.
* Procedure:
  While depressing the VIDEO and the PLII buttons simultaneously, press the power I/⏻ button to turn on the main power. The message "FACTORY" appears and switch off the set. Press the power I/⏻ button again, and the present contents are reset to the default values.

MICRO/NORMAL SPEAKER SELECTION MODE

* Either the micro speaker mode or normal speaker mode can be selected.
* Procedure
  While depressing the MUTING button, press the power I/⏻ button to turn on the main power. Either the message "MICRO SP." or "NORM. SP." appears. Select the desired mode.

SOUND FIELD CLEAR MODE

* The preset sound field is cleared when this mode is activated. Use this mode before returning the product to clients upon completion of repair.
* Procedure:
  While depressing the SOUND FIELD button, press the power I/⏻ button to turn on the main power. The message "S. F. CLR" appears and initialization is performed.

ALL CLEAR MODE

* The all preset value is cleared when this mode is activated.
* Procedure :
  While depressing the VIDEO and the SOUND FIELD buttons simultaneously, press the power I/⏻ button to turn on the main power. The message "INITIAL" appears and clear all preset value.

FAN CONTROL MODE

* Either the fan auto mode or fan on mode can be selected.
* Procedure:
  While depressing the PLII button, press the power I/⏻ button. Either the message "FAN AUTO" or "FAN ON" appears. Select the desired mode.

SOFTWARE VERSION DISPLAY MODE

* The software version is displayed.
* Procedure:
  While depressing the VIDEO and the MUTING buttons simultaneously, press the power I/⏻ button to turn on the main power. The model name, destination and the software version are displayed.

KEY CHECK MODE

* Button check
* Procedure:
  While depressing the DVD and the MUTING buttons simultaneously, press the power I/⏻ button to turn on the main power.
  "REST 09" appears.
  Every pressing of any button other than I/⏻ counts down the buttons. The buttons which are already counted once are not counted again. When all buttons are pressed "REST 00" appears.

FLUORESCENT INDICATOR TUBE TEST MODE

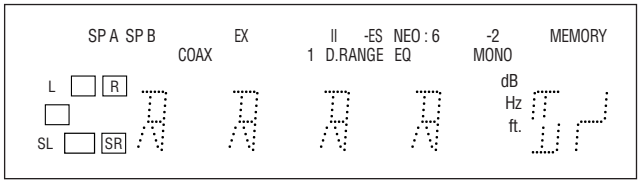
* All fluorescent segments are tested. When this test is activated, all segments turn on at the same time, then each segment turns on one after another.
* Procedure:
  While depressing the DVD and the PLII buttons simultaneously, press the power I/⏻ button to turn on the main power.

1. All segments turn on.

SP SP A SP B DIGITAL EX PRO LOGIC II DTS-ES NEO : 6 MPEG-2 AAC MEMORY
OPT COAX MULTI CH IN 12 D.RANGE EQ STEREO MONO RDS SLEEP
L C R
SW L F E
SL SSB SR
dB
kHz
mft.
MHz

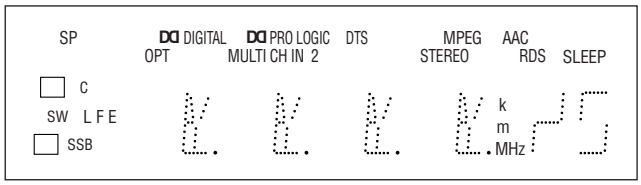
VIDEO, DVD, TV/SAT and TUNER FM/AM LED turn on.

2. Press the VIDEO button, confirm display



VIDEO, and TUNER FM/AM LED turn on.

3. Press the VIDEO button, confirm display



DVD and TV/SAT LED turn on.

4. Press the VIDEO button, all segments turn off.

5. Every pressing of the VIDEO button turns on each segment and LED one after another in the same order.
   (Not only the VIDEO button, but also the other buttons such as DVD, TV/SAT, TUNER FM/AM can be used.)

TUNER CHECK MODE

* Tuner check
* Procedure :
  While depressing the TUNER FM/AM and the MUTING buttons simultaneously, press the power I/⏻ button to turn on the main power. TUN CHK appears and the tuner checking is performed.

DSP TEST MODE

* DSP tests are performed.
* Procedure :
  There are two different methods to enter the test mode.

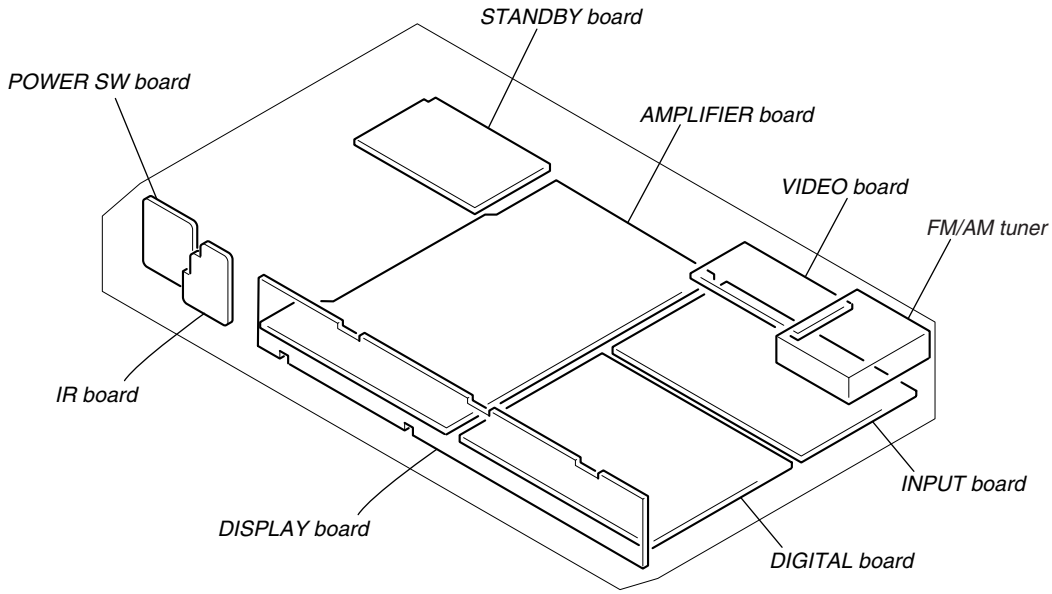
(1) While depressing the DVD and SOUND FIELD buttons simultaneously, press the power I/⏻ button to turn on the main power.

(2) When the set is turned on, by using the remote controller, press Cursor button three times, then press the MAIN MENU button one time and thenpress the MUTING button one time.
  • Select the item by pressing Cursor button (↑ or ↓).
  • Select the function by pressing Cursor button (← or →).

Items	Function	Description	Remark
SWAP	NORM	Normal channel output	Selection of setting output channels
	ALL	Left input → Front Left, Surround Left, Center channel output Right input → Front Right, Surround Right, Sub Woofer channel output	
	C SW	Left input → Center channel output Right input → Sub Woofer channel output	
	SLSR	Left input → Surround Left channel output Right input → Surround Right channel output	
DSP Version	–	"DSPV XXX" is displayed. Three large charactors are the dsp version that is being used.	
DSP communication	–	When this item is selected the message will be displayed " OK " if the checking is correct. " ERROR " will be displayed in a case of an error.	Checking communication between DSP and microcom
Bass Management	–	Not used for service	
Main Speaker cut off Freq.	–	Not used for service	
LFE cut off Freq.	–	Not used for service	
Co-ef. Read Address	–	Not used for service	
Co-ef. Read Data	–	Not used for service	
Co-ef. Write Address	–	Not used for service	
Co-ef. Write Data	–	Not used for service	
SRAM	OFF	" RAMC. OFF " will be displayed in a case of no checking.	Checking communication between DSP and SRAM
	ON	By pressing Cursor button the checking starts. " RAMC. PASS " will be displayed if the checking is good. " RAMC. NG " will be displayed if an error occurs.	
Total operation time	–	TTL-XXXX xx is displayed.	Four large charactors are hour. Two small charactors are minutes.
Longest Power ON time	–	LNG-XXXX xx is displayed.	
Output time less than –50dB volume	–	V50-XXXX xx is displayed.	
Output time less than –40dB volume	–	V40-XXXX xx is displayed.	
Output time less than –30dB volume	–	V30-XXXX xx is displayed.	
Output time less than –20dB volume	–	V20-XXXX xx is displayed.	
Output time less than –10dB volume	–	V10-XXXX xx is displayed.	
Output time less than 0dB volume	–	V00-XXXX xx is displayed.	
Protector count value	–	PROTXXXX xx is displayed.	0 to 255
Fuse open count value	–	FUSEXXXX xx is displayed.	
EEPROM CONDITION	–	E- XXXX is displayed. S RST → Super Reset : first time use EEPROM or test pattern corrupted FAIL → EEPROM read / write with microcom has problem V CHG → Software version change D CHG → Destination / model change CLEAR → Back up data initialize NORM → Normal AC on	
EEPROM READ	–	E- XXX-XX is displayed. First four hex code is EEPROM address (controlled by +/– button). Last two hex code is EEPROM data.	
EEPROM Super Reset	–	S.RST- XXX is displayed. When YES is selected, press Cursor button to clear all EEPROM data	
DSP HALT MODE	–	HALT NO or HALT YES is displayed.	

SECTION 3
DIAGRAMS

• Circuit Boards Location



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this necessary note is printed in each block.)

For schematic diagrams.
Note:

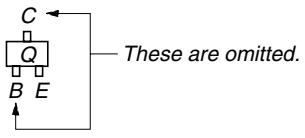
- All capacitors are in µF unless otherwise noted. p : pF. 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- : nonflammable resistor.
- : panel designation.

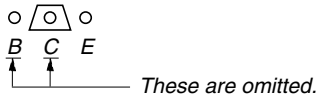
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- : B+ Line.
- : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  No mark : FM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  : ANALOG
  : DIGITAL
  : DVD

For printed wiring boards.
Note:

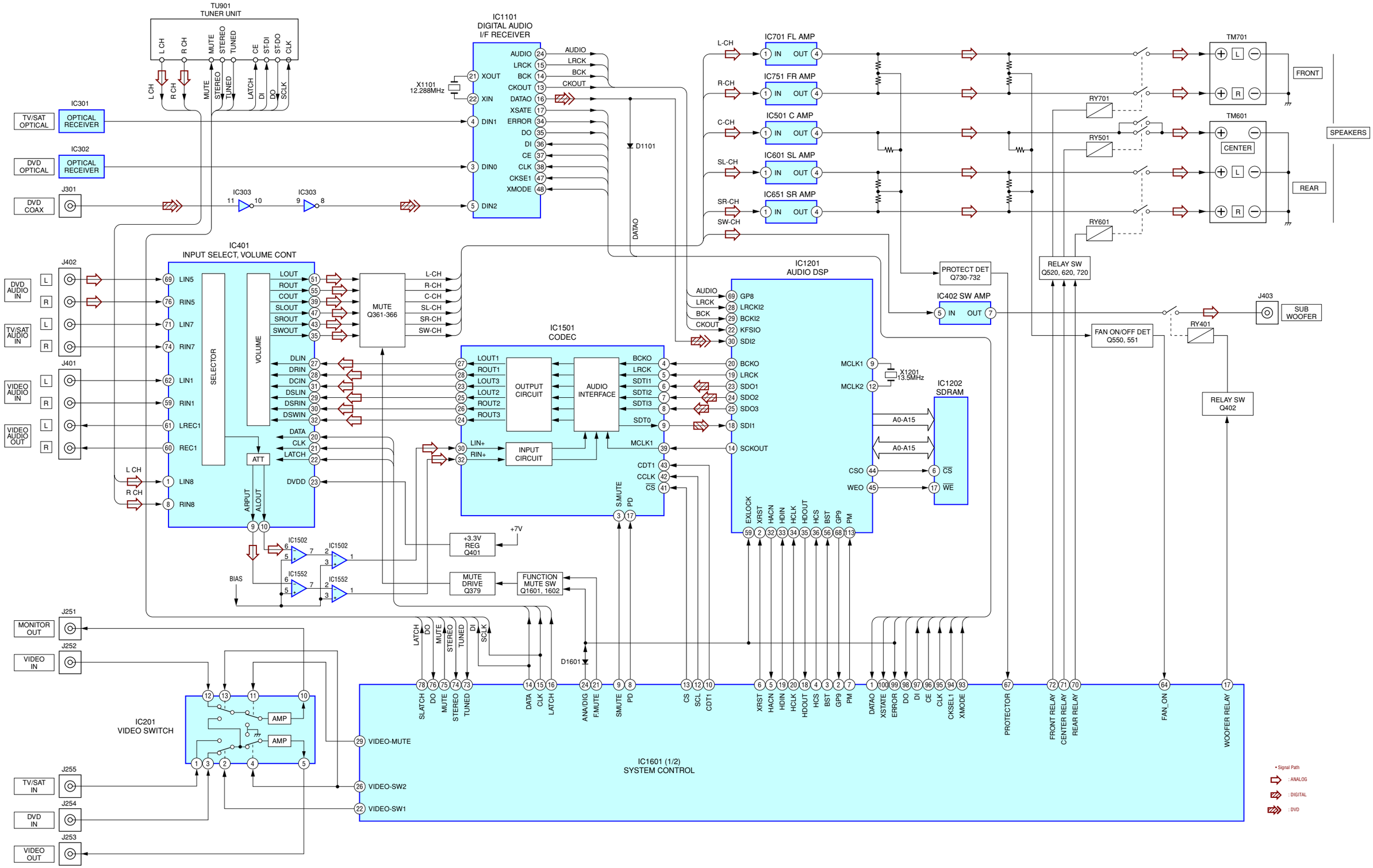
- : parts extracted from the component side.
- ○ : Through hole.
- : Pattern from the side which enables seeing.





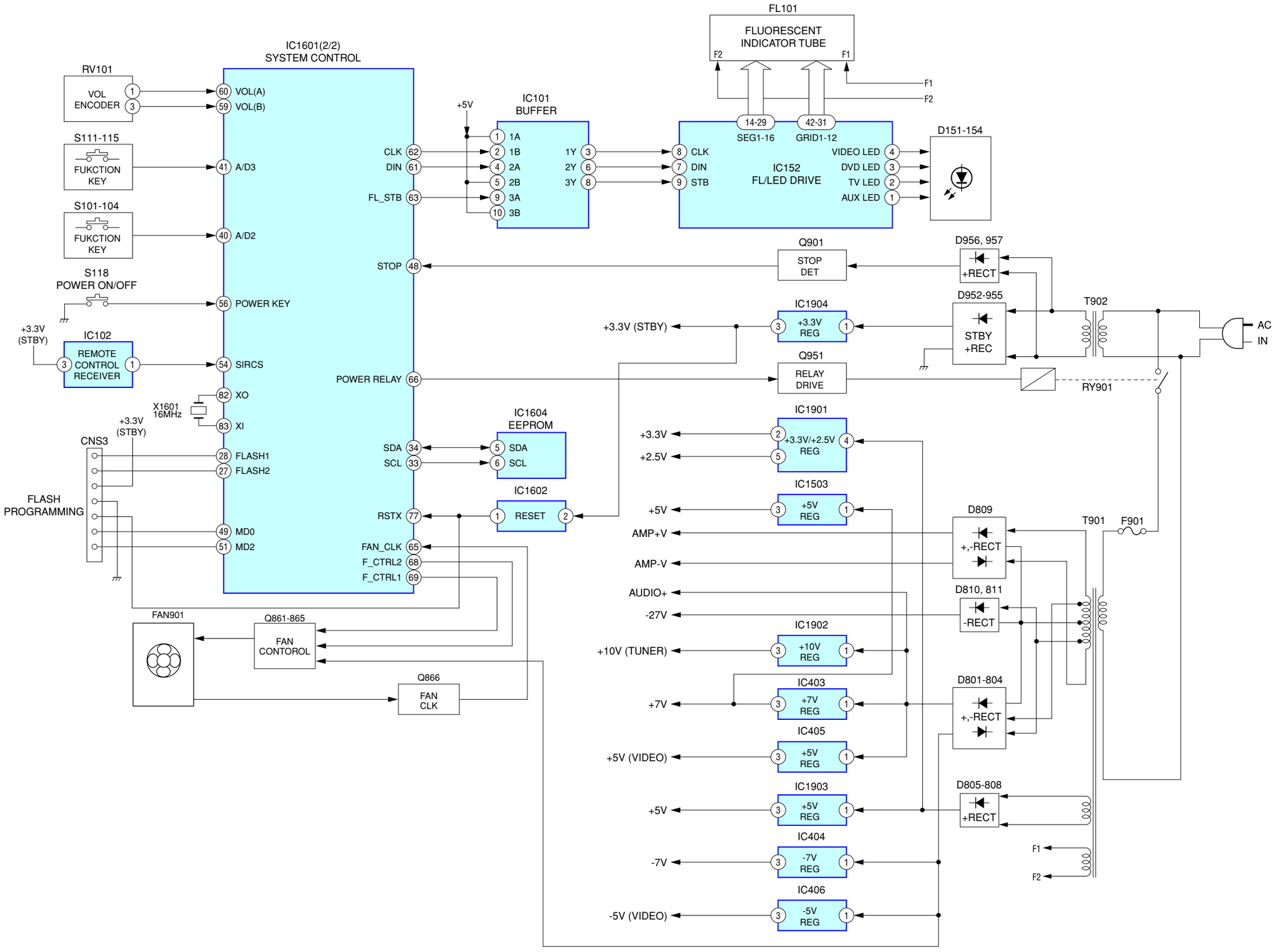
Caution:	
Pattern face side: (Side A)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side B)	Parts on the parts face side seen from the parts face are indicated.

3-1. Block Diagrams – Main Section –



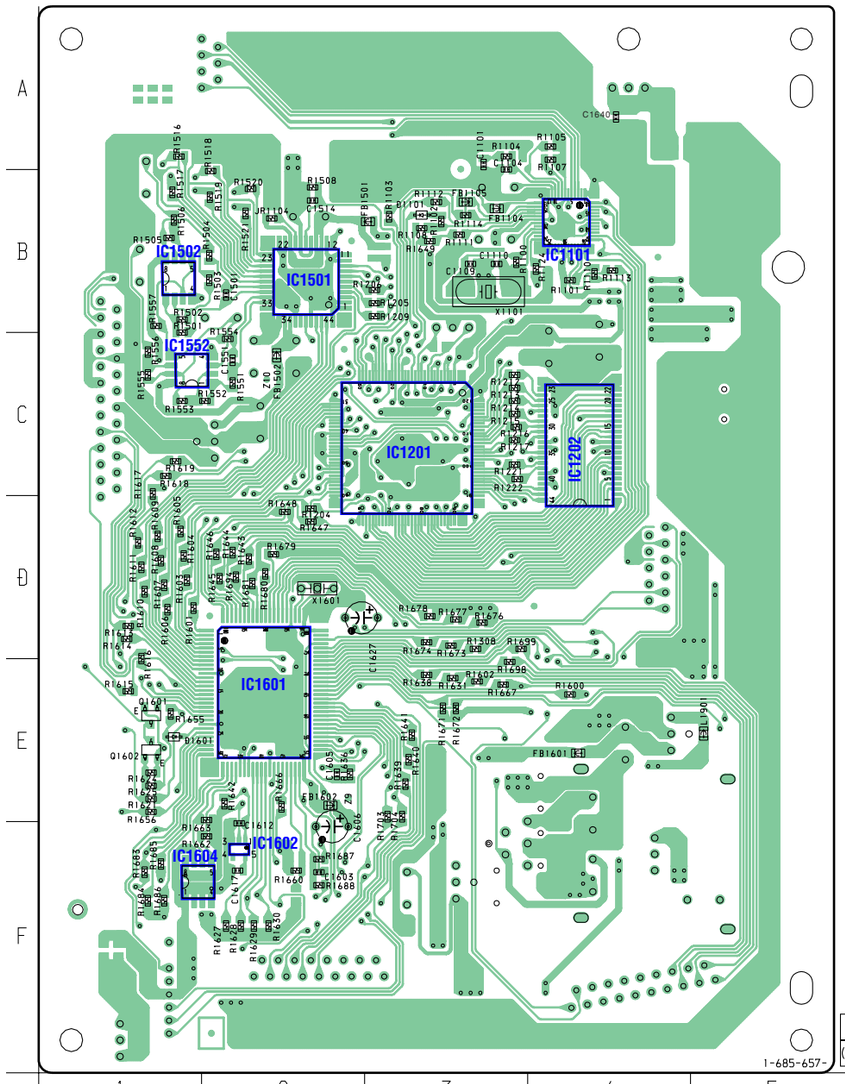
STR-KSL5

– Display/Power Section –

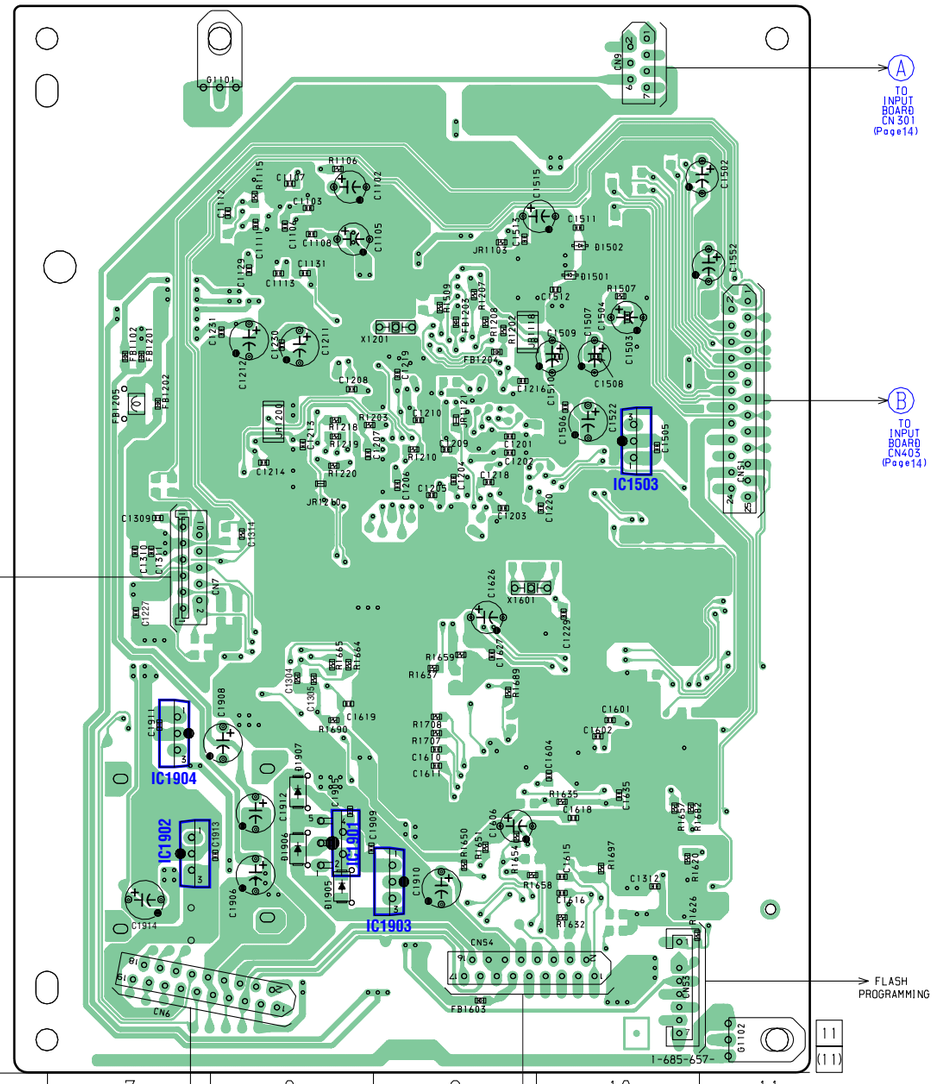


3-2. Printed Wiring Board – Digital Section – • : Uses unleaded solder. • See page 6 for Circuit Boards Location.

【DIGITAL BOARD】(SIDE A)



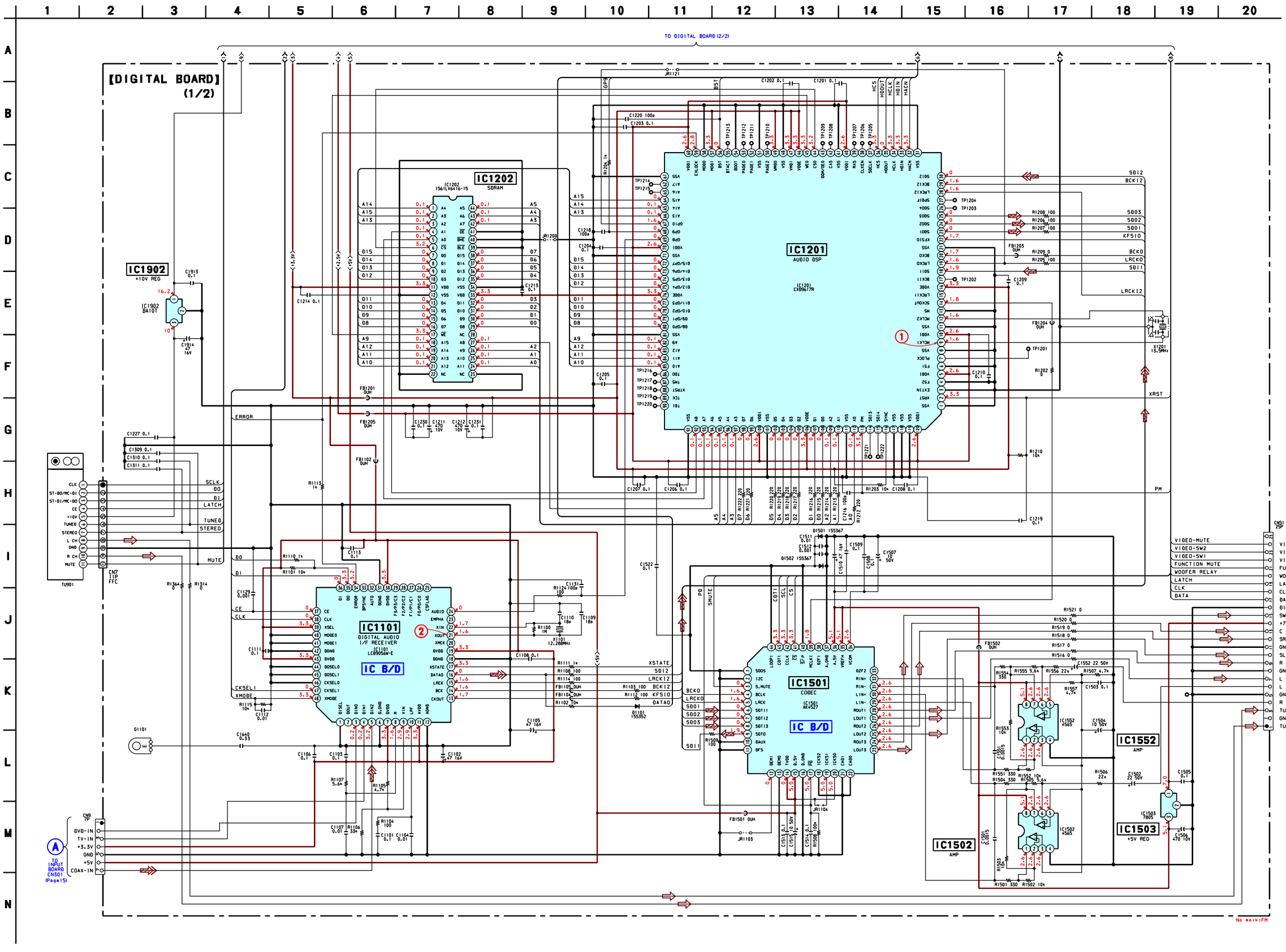
【DIGITAL BOARD】(SIDE B)



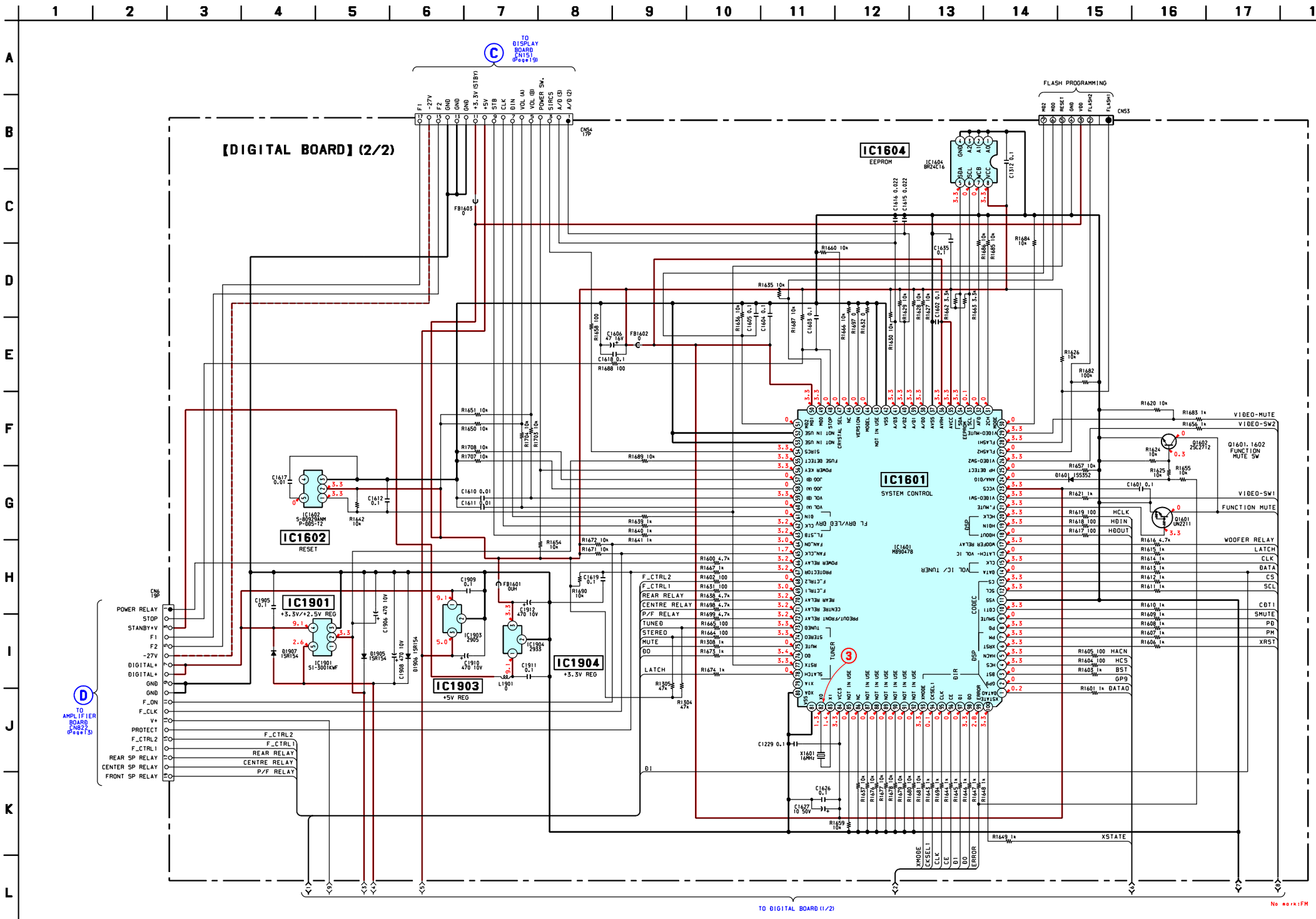
• **Semiconductor Location**

Ref. No.	Location
D1101	B-3
D1501	B-10
D1502	B-10
D1601	E-1
D1905	F-8
D1906	F-8
D1907	E-8
IC1101	B-4
IC1201	C-3
IC1202	C-4
IC1501	B-2
IC1502	B-1
IC1503	C-10
IC1552	C-1
IC1601	E-2
IC1602	F-2
IC1604	F-2
IC1901	F-8
IC1902	F-7
IC1903	F-9
IC1904	E-7
Q1601	E-1
Q1602	E-1

3-3. Schematic Diagram – Digital Section (1/2) – • See page 11 for Wavefoms. • See page 22 for IC Block Diagrams. • See page 23 for IC Pin Function Description.



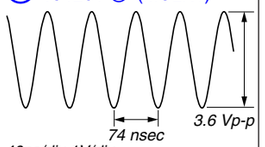
3-4. Schematic Diagram – Digital Section (2/2) – • See page 25 for IC Pin Function Description.



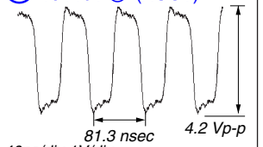
• **Waveforms**

– DIGITAL Board –

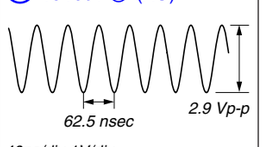
① IC1201 ⑨ (MCLK1)



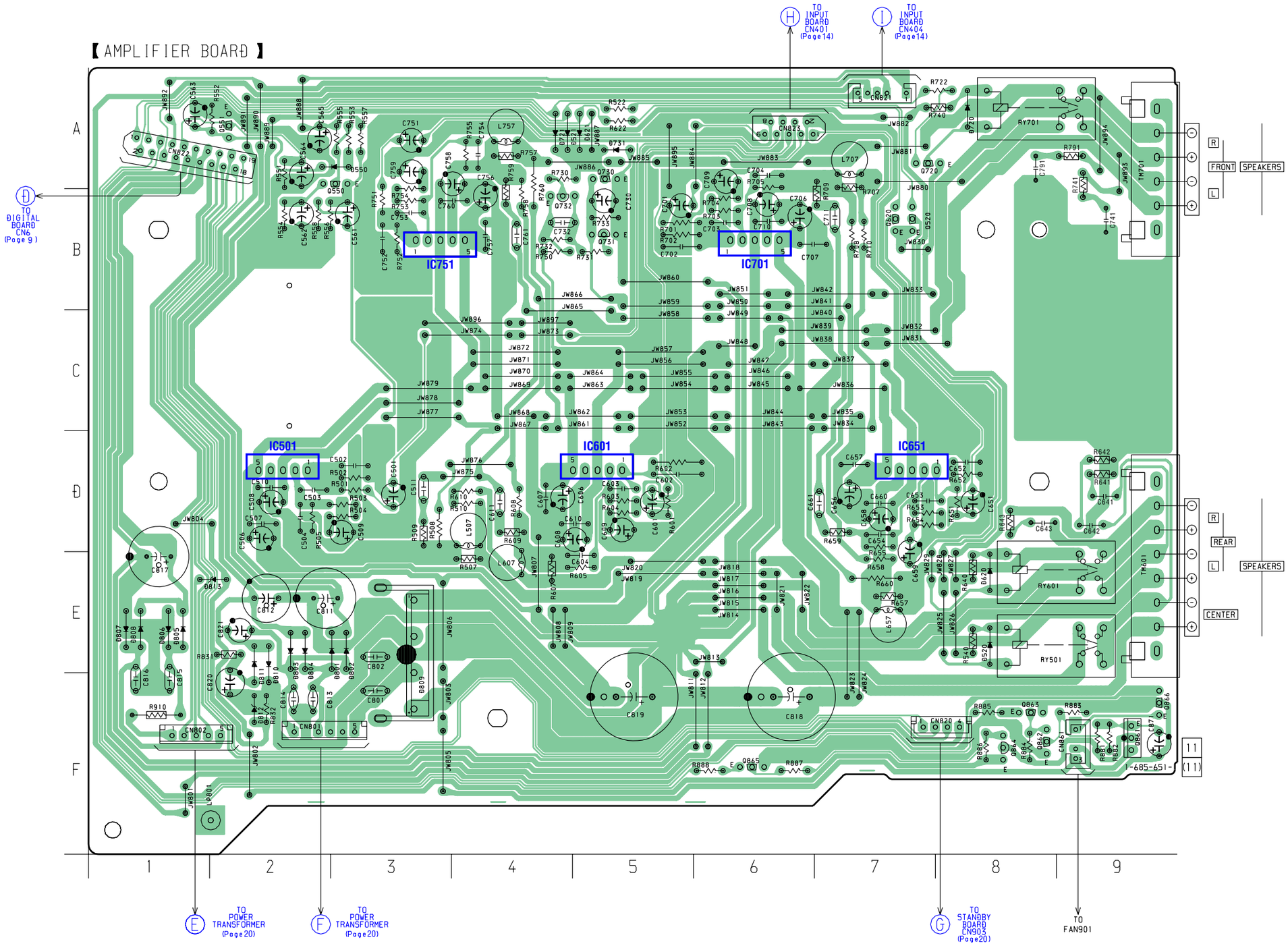
② IC1101 ㉑ (XOUT)



③ IC1601 ㉜ (XO)



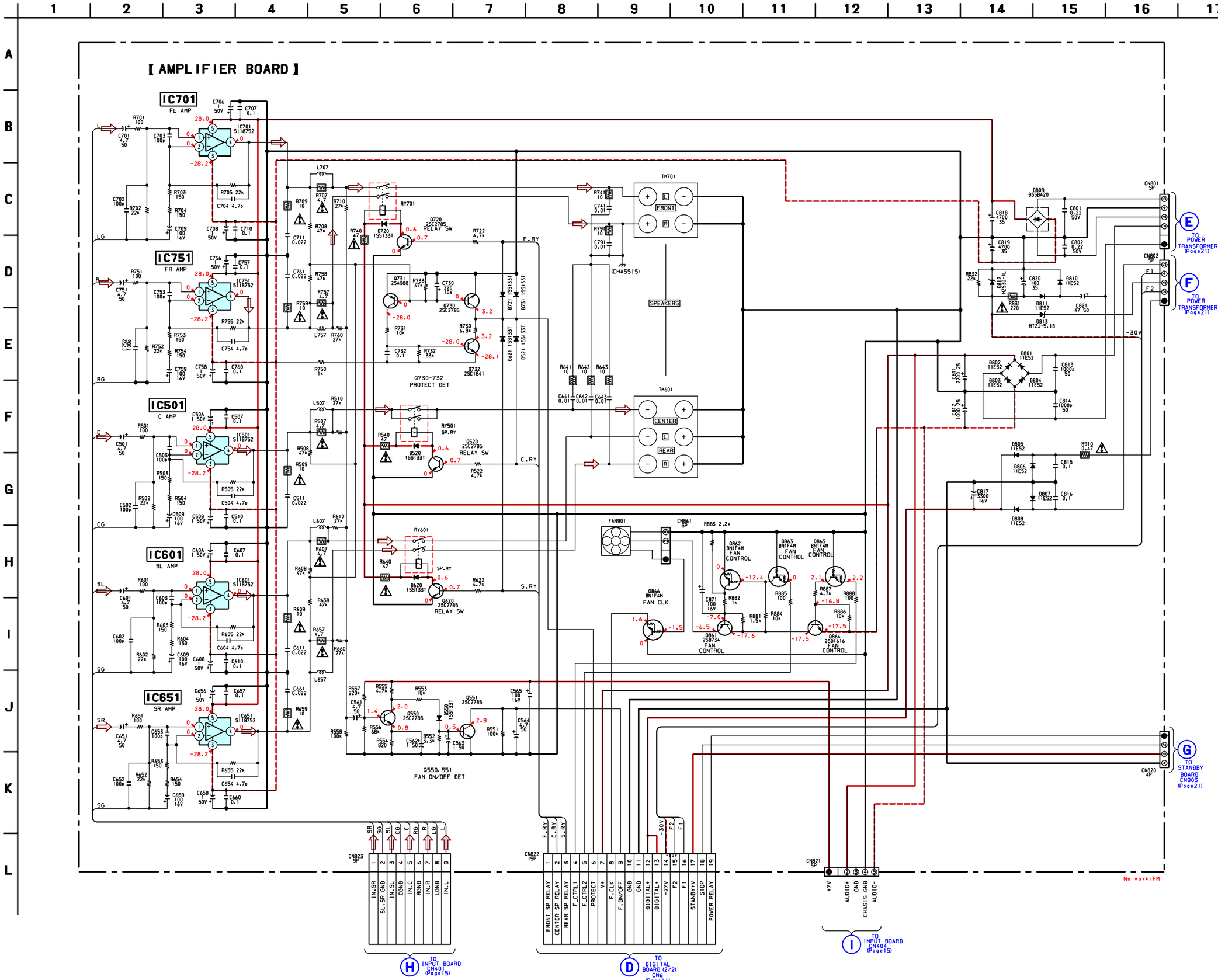
3-5. Printed Wiring Board – AMP Section – • : Uses unleaded solder. • See page 6 for Circuit Boards Location.



• **Semiconductor Location**

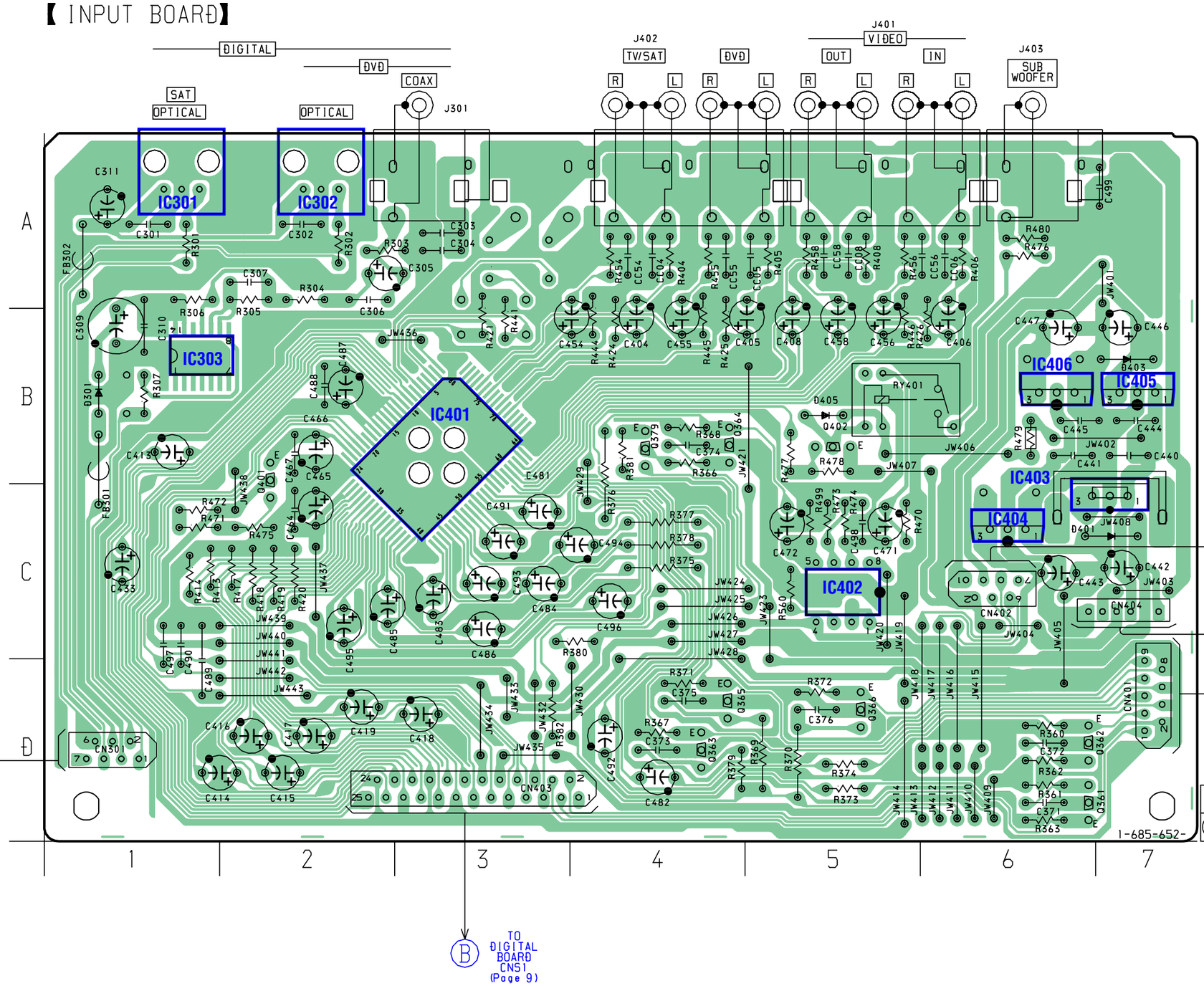
Ref. No.	Location
D520	E-8
D521	A-5
D550	A-2
D620	E-8
D621	A-5
D720	A-8
D721	A-2
D731	A-5
D801	E-3
D802	E-3
D803	E-2
D804	E-2
D805	E-1
D806	E-1
D807	E-1
D808	E-1
D809	F-3
D810	E-2
D811	E-2
D812	F-2
D813	E-2
IC501	D-2
IC601	D-5
IC651	D-7
IC701	B-6
IC751	B-3
Q520	B-7
Q550	B-2
Q551	A-2
Q620	B-7
Q720	A-7
Q730	B-5
Q731	B-5
Q732	B-4
Q861	F-9
Q862	F-8
Q863	F-8
Q864	F-8
Q865	F-6
Q866	F-9

3-6. Schematic Diagram – AMP Section –



3-7. Printed Wiring Board – Input Section – • : Uses unleaded solder. • See page 6 for Circuit Boards Location.

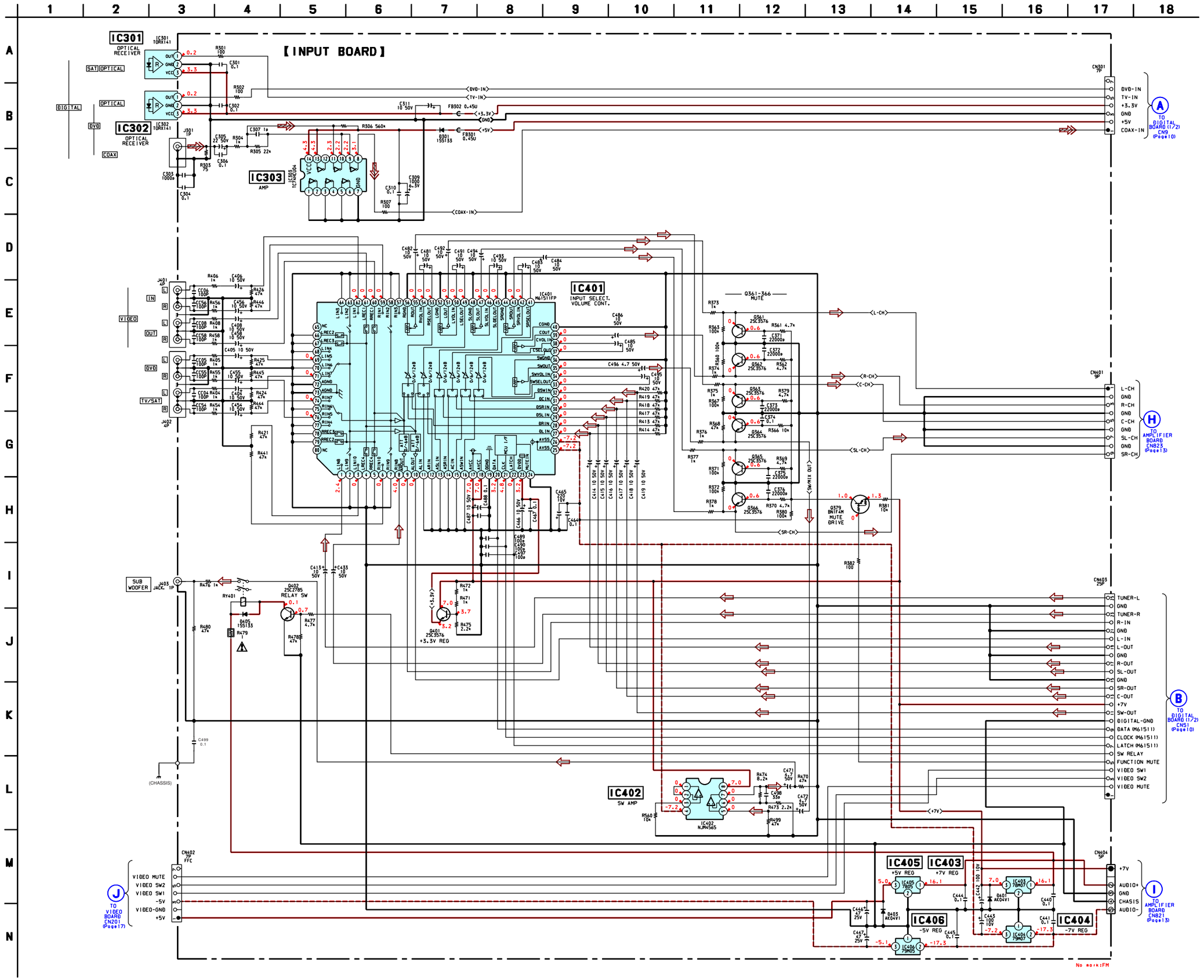
【 INPUT BOARÐ】



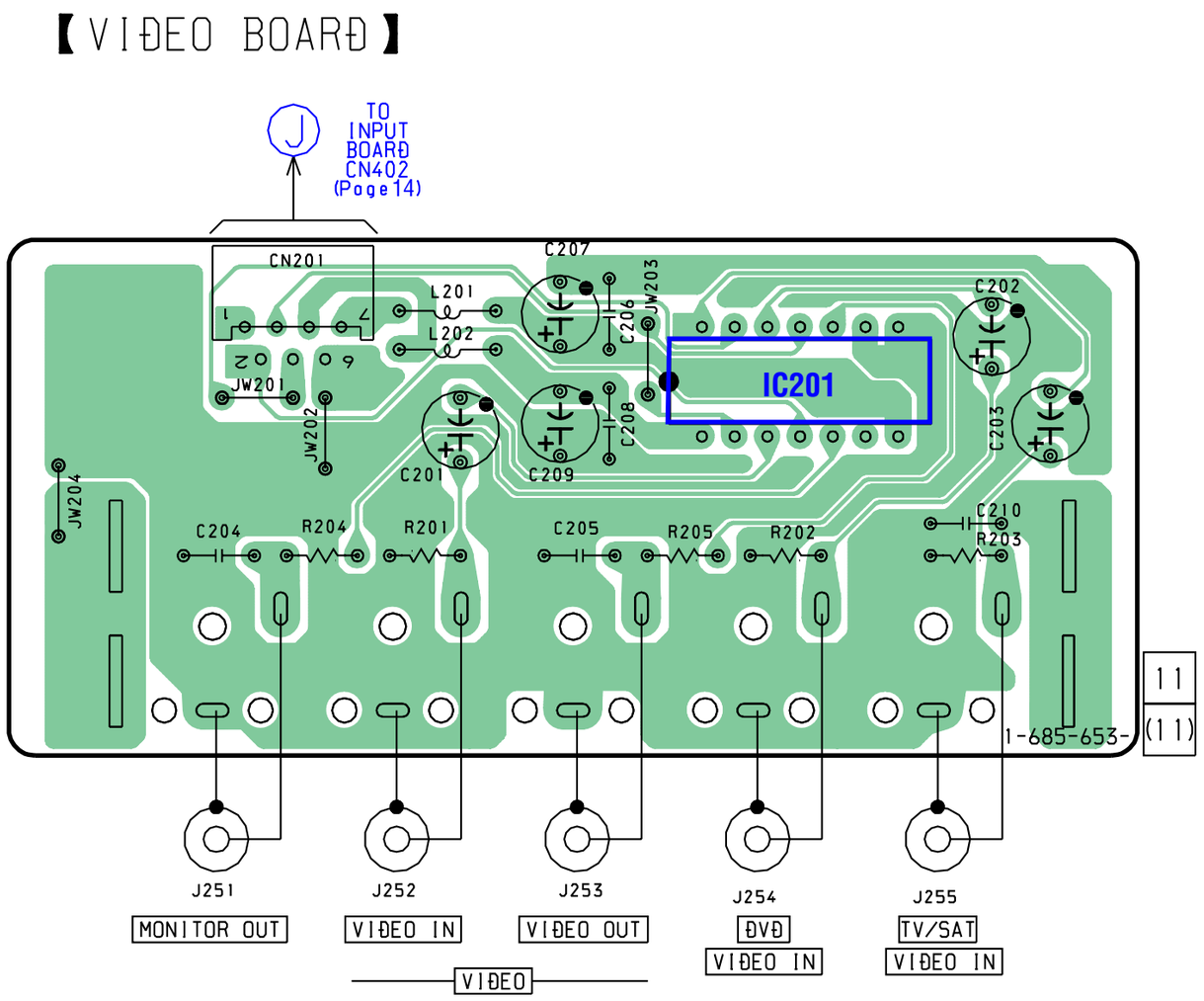
- **Semiconductor Location**

Ref. No.	Location
D301	B-1
D401	B-7
D403	B-7
D405	B-5
IC301	A-1
IC302	A-2
IC303	B-1
IC401	B-3
IC402	C-5
IC403	C-6
IC404	C-6
IC405	B-7
IC406	B-6
Q361	D-7
Q362	D-7
Q363	D-4
Q364	B-4
Q365	D-4
Q366	D-5
Q379	B-4
Q401	B-2
Q402	B-5

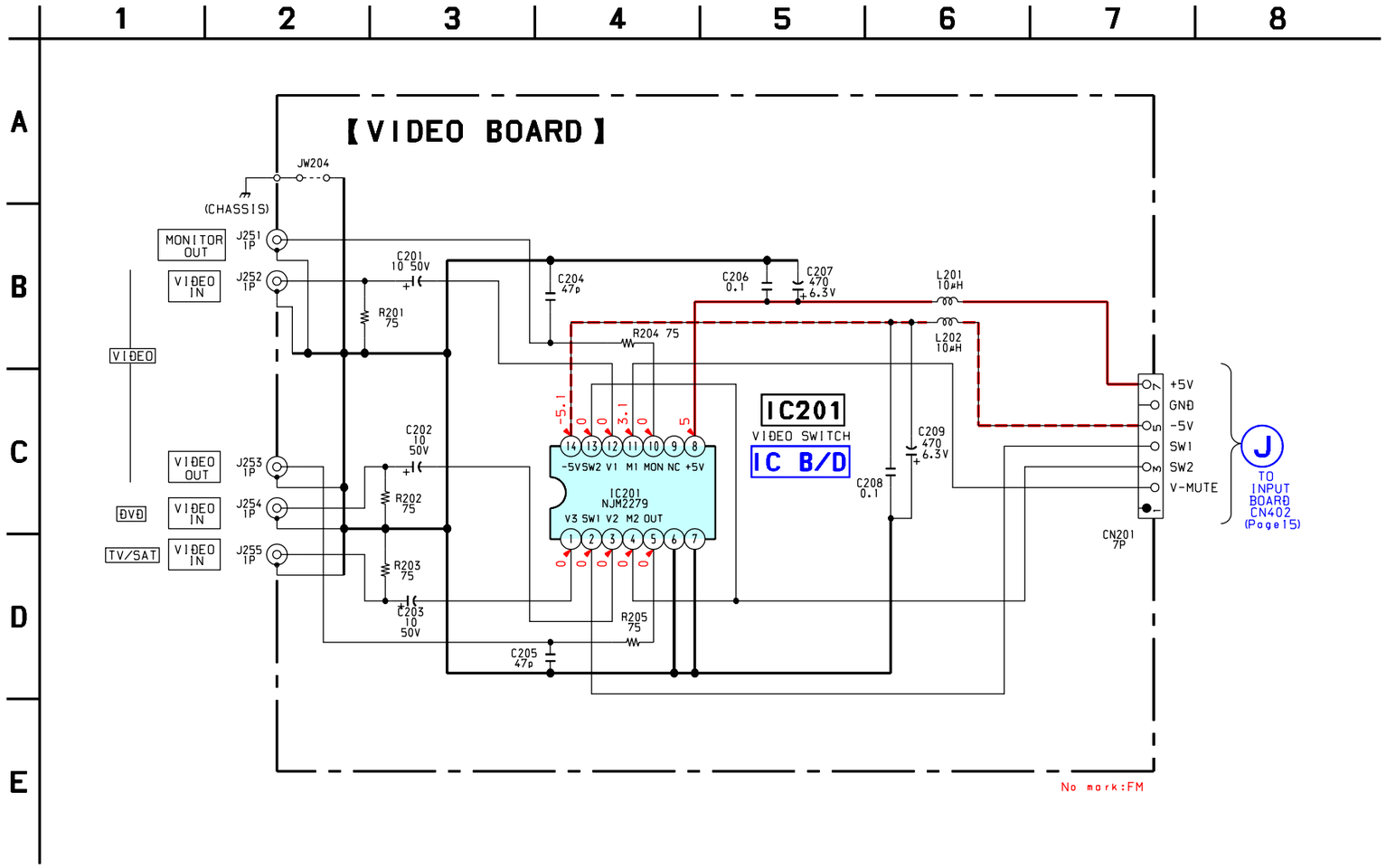
3-8. Schematic Diagram – Input Section –



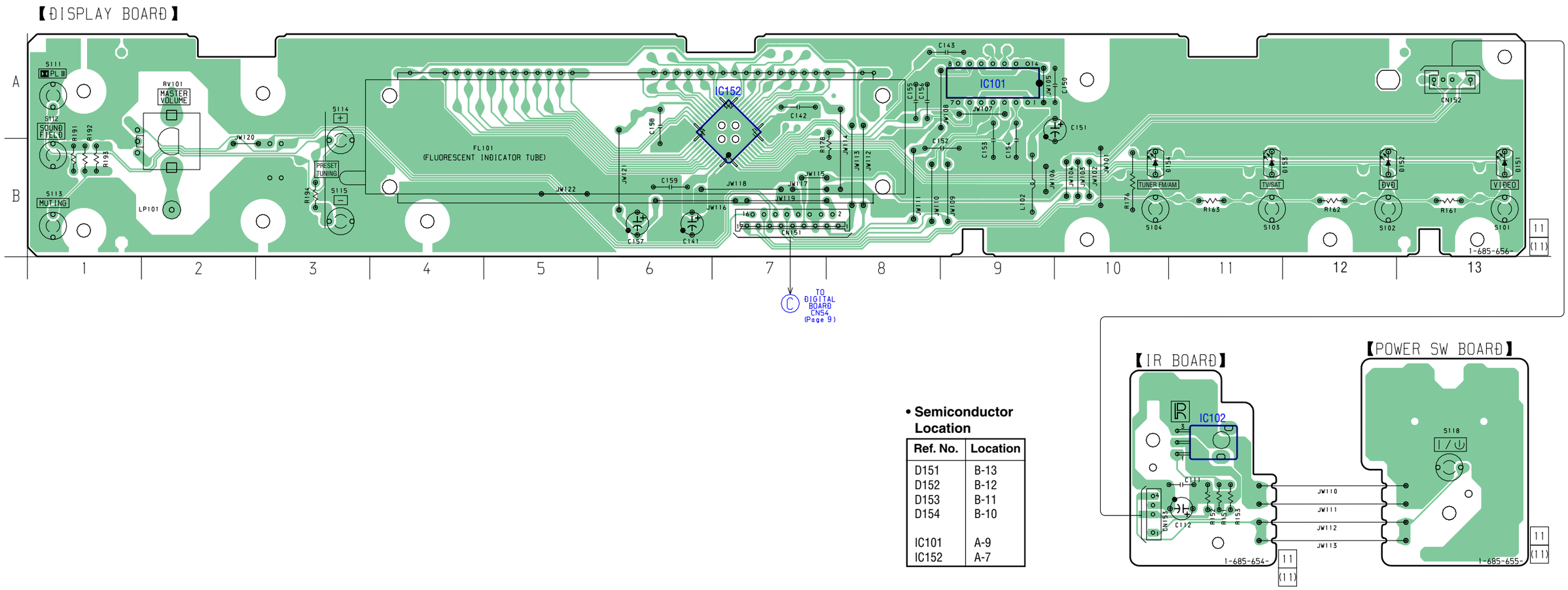
3-9. Printed Wiring Board – Video Section – • : Uses unleaded solder. • See page 6 for Circuit Boards Location.



3-10. Schematic Diagram – Video Section – • See page 22 for IC Block Diagrams.



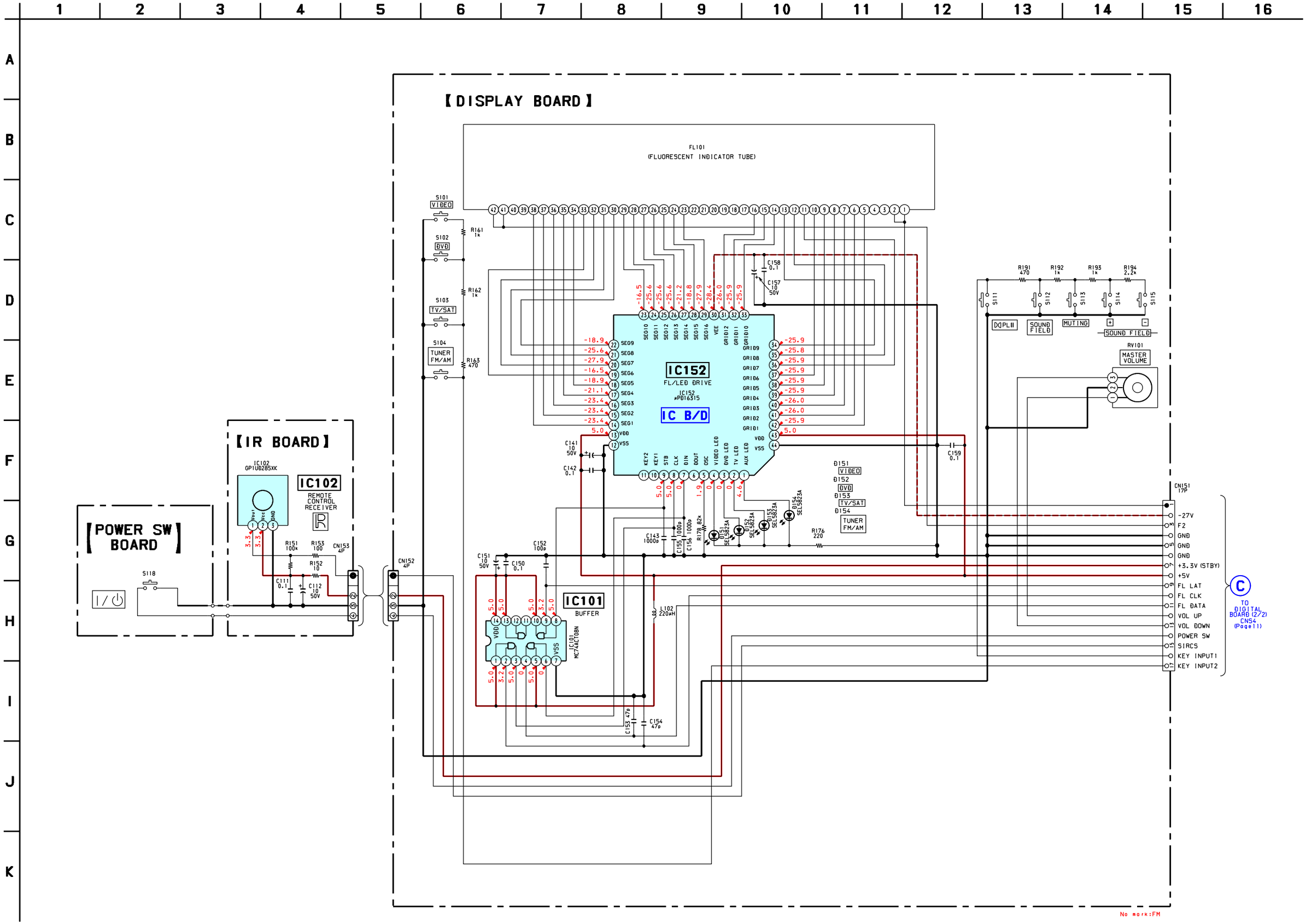
3-11. Printed Wiring Board – Display Section – • : Uses unleaded solder. • See page 6 for Circuit Boards Location.



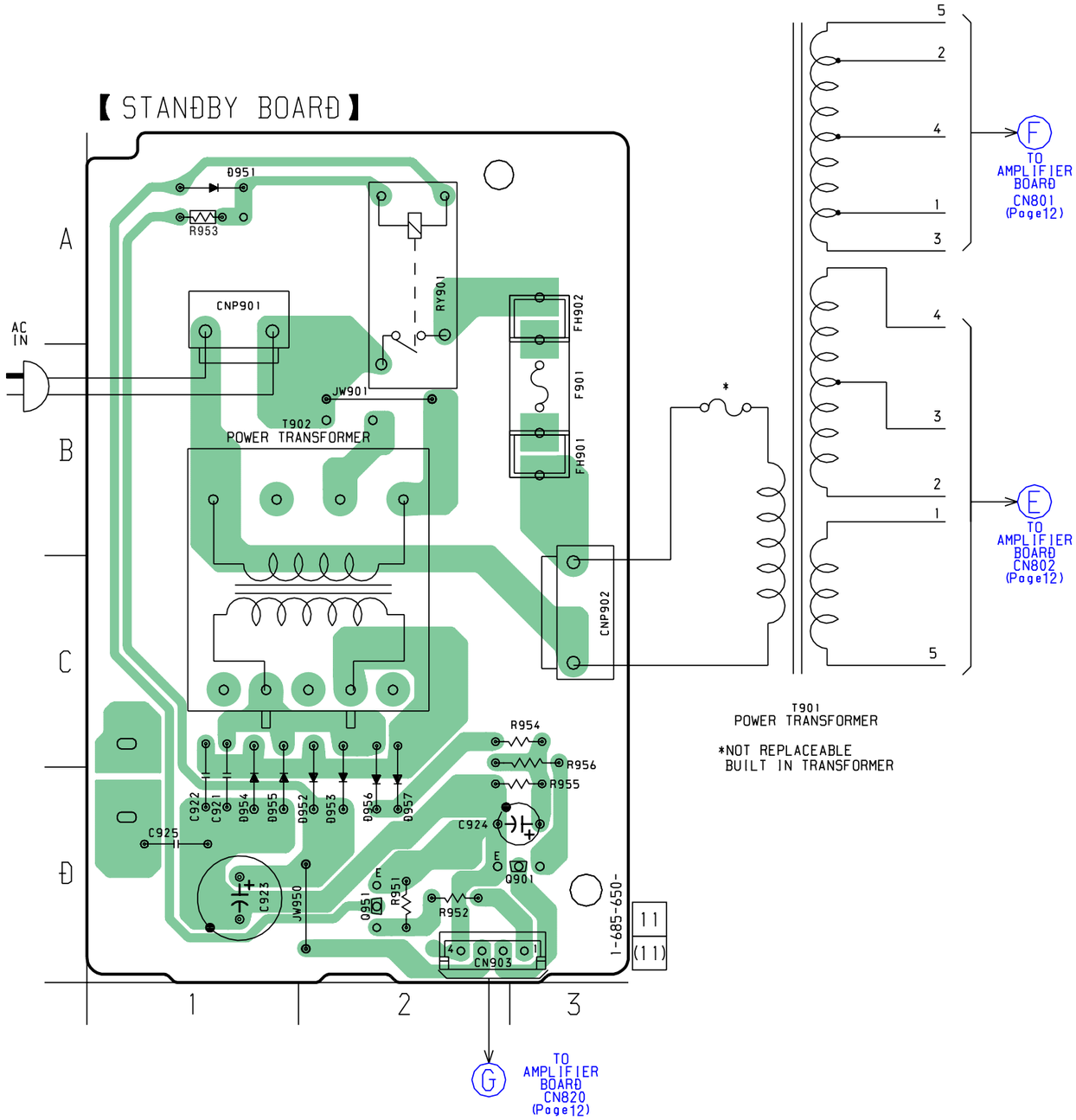
• **Semiconductor Location**

Ref. No.	Location
D151	B-13
D152	B-12
D153	B-11
D154	B-10
IC101	A-9
IC152	A-7

3-12. Schematic Diagram – Display Section – • See page 22 for IC Block Diagrams.



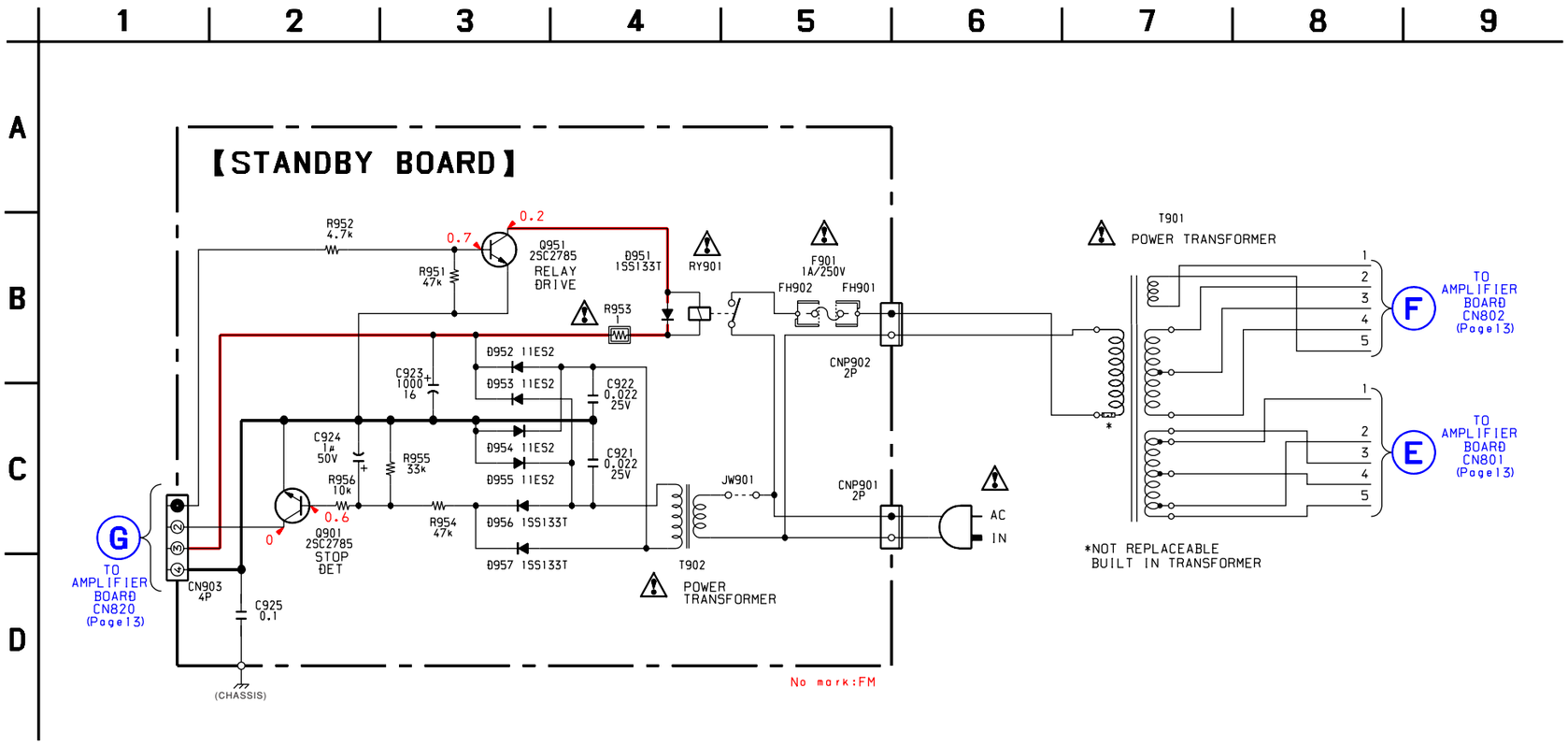
3-13. Printed Wiring Board – Power Section – • : Uses unleaded solder. • See page 6 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
D951	A-1
D952	D-2
D953	D-2
D954	D-1
D955	D-1
D956	D-2
D957	D-2
Q901	D-3
Q951	D-2

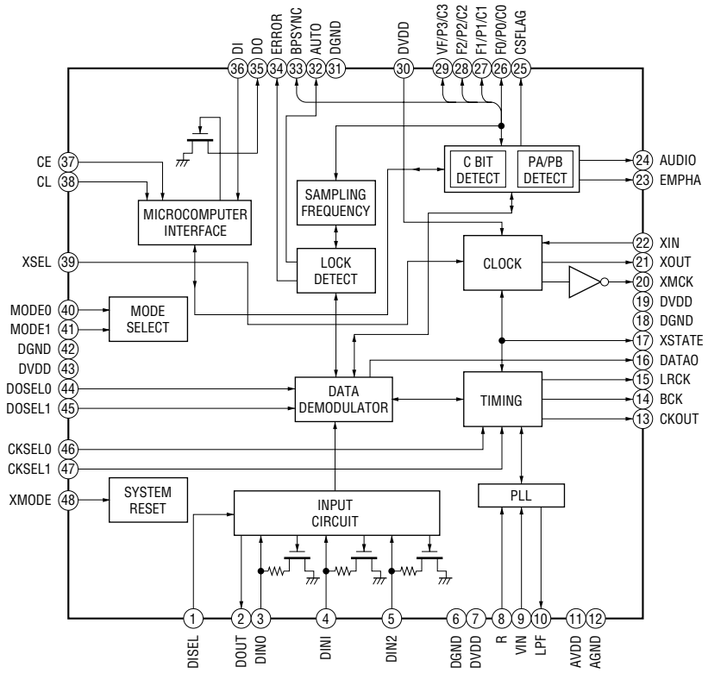
3-14. Schematic Diagram – Power Section –



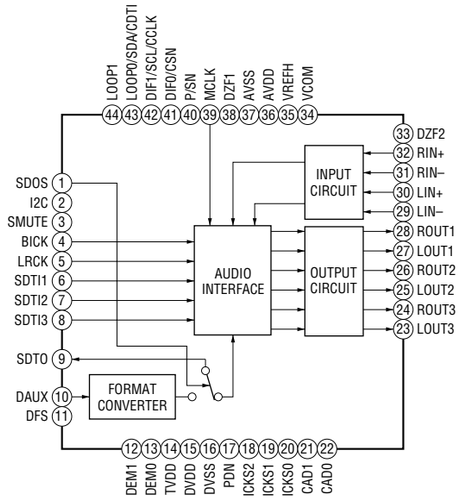
3-15. IC Block Diagram

– DIGITAL Board –

IC1101 LC89056W-E

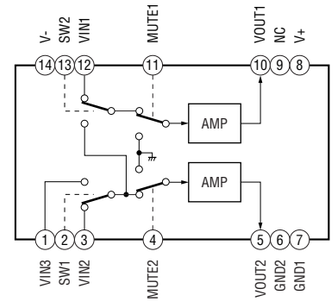


IC1501 AK4527



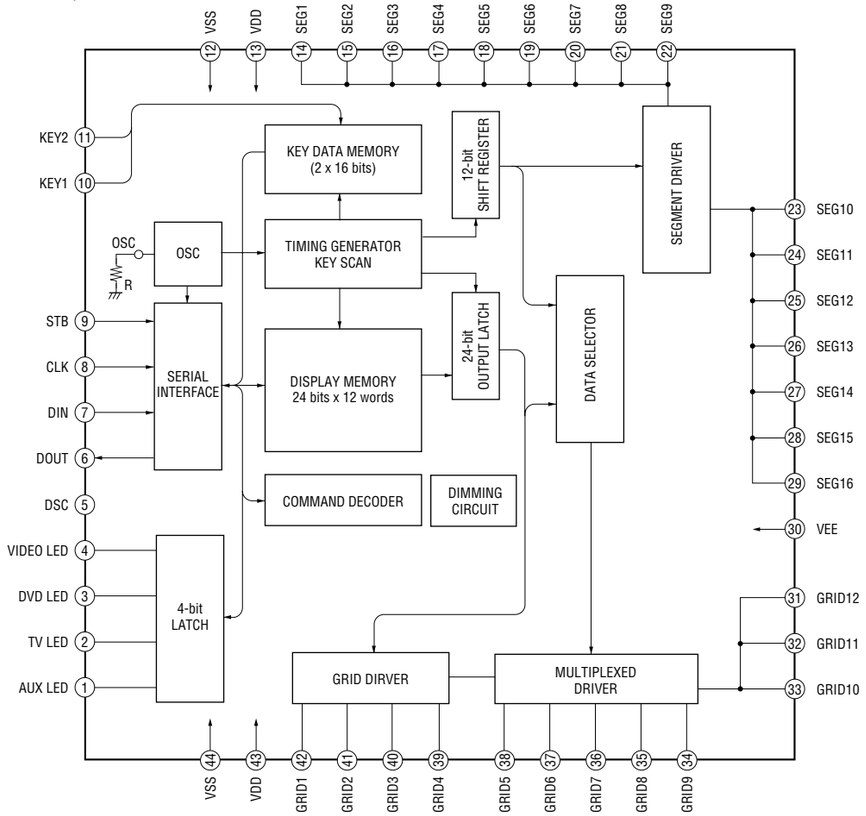
– VIDEO Board –

IC201 NJM2279D



– DISPLAY Board –

IC152 µPD16315GB-3BS



3-16. IC Pin Function Descriptions

• IC1201 CXD9617R (AUDIO DSP) (DIGITAL BOARD)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal
2	XRST	I	Rest input from the system control
3	EXTIN	I	Not used (Ground)
4	FS2	I	Not used (Ground)
5	VDD1	—	+2.5V
6	FS1	I	Not used (Ground)
7	PLOCK	O	Internal PLL lock signal output (TP1201)
8	VSS	—	Ground terminal
9	MCLK1	I	Clock pulse input
10	VDD1	—	+2.5V
11	VSS	—	Ground terminal
12	MCLK2	I/O	Clock pulse input-output
13	MS	I	Not used (Ground)
14	SCKOUT	O	Internal system and clock power output to the CODEC (IC1501)
15	LRCKI1	I/O	Not used
16	VDDE	—	+3.3V
17	BCKI1	I/O	Bit clock input-output terminal for audio interface serial data (TP1202)
18	SDI1	I	Data input from the CODEC (IC1501)
19	LRCKO	O	Sampling clock output to the CODEC (IC1501)
20	BCKO	O	Bit clock output to the CODEC (IC1501)
21	VSS	—	Ground terminal
22	KFSIO	I/O	Audio clock (384fs/256fs) input from the DIR (IC1101)
23-25	SDO1-SDO3	O	Serial data output to the CODEC (IC1501)
26	SDO4	O	Serial data output terminal (TP1203)
27	SPDIF	O	SPDIF power output terminal (TP1204)
28	LRCKI2	I	Sampling clock input to the DIR (IC1101)
29	BCKI2	I	Bit clock input from the DIR (IC1101)
30	SDI2	I	Data input from the DIR (IC1101)
31	VSS	—	Ground terminal
32	HACN	O	Acknowledge output to the system control (IC1601)
33	HDIN	I	Serial data input from the system control (IC1601)
34	HCLK	I	Clock input from the system control (IC1601)
35	HDOUT	O	Serial data output to the system control (IC1601)
36	HCS	I	Chip selection input from the system control (IC1601)
37	SDCLK	O	SDRAM clock (TP1205)
38	CLKEN	O	SDRAM clock enable (TP1206)
39	RAS	O	Row address strobing (TP1207)
40	VDDI	—	+2.5V
41	VSS	—	Ground terminal
42	CAS	O	Column address strobing (TP1208)
43	DQM/OE0	O	Data I/O mask (TP1209)
44	CSO	O	Chip selection output to the SRAM (IC1202)
45	WEO	O	Write enable output to the SRAM (IC1202)
46	VDDE	—	+3.3V
47	WMD1	I	Setting for external memory WAIT mode (pull up)
48	VSS	—	Ground terminal
49	WMD0	I	Setting for external memory WAIT mode (pull up)
50	PAGE2	O	ERAM page switch (TP1210)
51	VSS	—	Ground terminal
52	PAGE1	O	ERAM page switch (TP1211)

Pin No.	Pin Name	I/O	Description
53	PAGE0	O	ERAM page switch (TP1212)
54	BOOT	I	Not used (Ground)
55	BTACT	O	Boot mode status display signal (TP1213)
56	BST	I	Boot strap signal input from the system control (IC1601)
57	MOD1	I	Setting for 256fs (pllx9) (pull up)
58	MOD0	I	Setting for single chip mode (pull down)
59	EXLOCK	I	Lock signal input terminal
60	VDDI	—	+2.5V
61	VSS	—	Ground terminal
62	A17	O	External memory address (TP1214)
63	A16	O	External memory address (TP1215)
64-66	A15-A13	O	Address signal output to the SRAM (IC1202)
67-69	GP10-GP8	I/O	External memory data I/O general purpose port terminal GP
70	VDDI	—	+2.5V
71	VSS	—	Ground terminal
72-75	D15-D12	I/O	SRAM (IC1202) data signal I/O terminal
76	VDDE	—	+3.3V
77-80	D11-D8	I/O	SRAM (IC1202) data signal I/O terminal
81	VSS	—	Ground terminal
82-85	A9-A10	O	Address signal output to the SRAM (IC1202)
86	TDO	O	Simple emulation data output (TP1216)
87	TMS	I	Simple emulation data entry beginning and the end terminal (TP1217)
88	XTRST	I	Asynchronous simple BREAK input terminal of emulation (TP1218)
89	TCK	I	Simple emulation clock input (TP1219)
90	TDI	I	Simple emulation data entry (TP1220)
91	VSS	—	Ground terminal
92-97	A8-A3	O	Address signal output to the SRAM (IC1202)
98,99	D7,D6	I/O	SRAM (IC1202) data signal I/O terminal
100	VDDI	—	+2.5V
101	VSS	—	Ground terminal
102-105	D5-D2	I/O	SRAM (IC1202) data signal I/O terminal
106	VDDE	—	+3.3V
107,108	D1,D0	I/O	SRAM (IC1202) data signal I/O terminal
109,110	A2,A1	O	Address signal output to the SRAM (IC1202)
111	VSS	—	Ground terminal
112	A0	O	Address signal output to the SRAM (IC1202)
113	PM	I	PLL initialization input from the system control (IC1601)
114	SD13	I	Data entry terminal (TP1221)
115	SD14	I	Data entry terminal (TP1222)
116	SYNC	I	Synchronization / asynchronous selection terminal (L:Sync. H:Async.)
117-119	VSS	—	Ground terminal
120	VDDI	—	+2.5V

• IC1601 MB90478PF-G-129-BND (SYSTEM CONTROL) (DIGITAL BOARD)

Pin No.	Pin Name	I/O	Description
1	DATA O	I	Data input from the DIR (IC1101)
2	GP9	I	External memory data input from the DSP (IC1201)
3	BEST	O	Boot strap signal output to the DSP (IC1201)
4	HCS	O	Chip selection signal output to the DSP (IC1201)
5	HACN	I	Acknowledge signal input from the DSP (IC1201)
6	XRST	O	Reset signal output to the DSP (IC1201)
7	PM	O	PLL initialization signal output to the DSP (IC1201)
8	PD	O	PD signal output to the CODEC (IC1501)
9	SMUTE	O	Smute signal output to the CODEC (IC1501)
10	CDT1	O	CDT1 signal output to the CODEC (IC1501)
11	VSS	—	Ground terminal
12	SCL	O	Serial clock signal output to the CODEC (IC1501)
13	CS	O	Chip selection signal output to the CODEC (IC1501)
14	DATA	O	Serial control data output to the tuner and IC401
15	CLK	O	Serial control clock output to the tuner and IC401
16	LATCH	O	Latch signal to the IC401
17	WOOFER RELAY	O	Sub woofer relay control signal output
18	HDOUT	I	Serial data input from the DSP (IC1201)
19	HDIN	O	Serial data output to the DSP (IC1201)
20	HCLK	O	Clock signal output to the DSP (IC1201)
21	F MUTE	O	Function mute signal output
22	VIDEO SW1	O	Video switch signal output to the IC201
23	VCC5	—	+3.3V (STBY)
24	ANA/DIG	O	Function mute and error port signal output
25	HD DETECT	I	Not used
26	VIDEO SW2	O	Video switch signal output to the IC201
27	FLASH2	I	Flash programming input
28	FLASH1	I	Flash programming input
29	VIDEO MUTE	O	Video mute signal output to the IC201
30	MODE	I	Not used
31	2CH	I	Not used
32	AFD	I	Not used
33	SCL	O	SCL signal output to the EEPROM (IC1604)
34	SDA	I/O	SDA signal from the EEPROM (IC1604)
35	AVCC	—	+3.3V(STBY)
36	AVRH	—	+3.3V(STBY)
37	AVSS	—	Ground terminal
38	A/D0	I	Not used
39	A/D1	I	Not used
40	A/D2	I	Key data signal input from S101-104
41	A/D3	I	Key data signal input from S111-115
42	VSS	—	Ground terminal
43	NOT IN USE	I	Ground terminal
44	MODEL	I	Model detection input (Ground terminal)
45	VERSION	I	Version resisrtor input (Ground terminal)
46	NC	I	Not used
47	CRYSTAL SEL	I	Not used
48	STOP	I	Power stop detection signal input
49	MD0	I	Flash programming MD0 input
50	MD1	I	Not used (connected to +3.3V(STBY))

Pin No.	Pin Name	I/O	Description
51	MD2	I	Flash programming MD2 input
52	NOT IN USE	I	Ground terminal
53	NOT IN USE	I	Ground terminal
54	SIRCS	I	Data input from the remote control receiver
55	FUSE DETECT	I	Connected to +3.3V through the resistor (47k ohm)
56	POWER KEY	I	Power swich detection signal input
57	JOG(B)	I	Not used
58	JOG(A)	I	Not used
59	VOL(B)	I	Volume signal input from the rotary encoder
60	VOL(A)	I	Volume signal input from the rotary encoder
61	DIN	O	Serial control data output to the FL/LED driver (IC152)
62	CLK	O	Clock signal output to the FL/LED driver (IC152)
63	FL_STB	O	STB signal output to the FL/LED driver (IC152)
64	FAN_ON	I	Fan on detection signal input
65	FAN_CLK	I	Feedback signal input from the fan (FAN901)
66	POWER RELAY	O	Power relay drive signal output
67	PROTECTOR	I	Protect detection signal input
68	F_CTRL2	O	Fan speed control signal output
69	F_CTRL1	O	Fan ON/OFF control signal output
70	REAR RELAY	O	Surround relay drive signal output
71	CENTER RELAY	O	Center relay drive signal output
72	FRONT RELAY	O	Front relay drive signal output
73	TUNED	I	Tuning a frequency detection signal input from the tuner
74	STEREO	I	STEREO tuning signal from the tuner
75	MUTE	O	Muting control signal output from the tuner
76	DO	I	Data input from the tuner
77	RSTX	I	System reset input
78	SLATCH	O	Serial control latch signal output to the tuner
79	X1A	—	Not used
80	X0A	—	Not used (connected to ground terminal)
81	VSS	—	Ground terminal
82	XO	O	Terminal for a oscillator
83	XI	I	Terminal for a oscillator
84	VCC3	—	+3.3V (STBY)
85	NOT IN USE	I	Not used
86	NC	I	Not used
87-92	NOT IN USE	I	Not used
93	XMODE	O	Reset signal output to DIR (IC1101)
94	CKSEL1	O	Not used
95	CLK	O	Clock signal output to DIR (IC1101)
96	CE	O	Chip enable signal output to DIR (IC1101)
97	DI	O	Write data output to DIR (IC1101)
98	DO	I	Read data input from DIR (IC1101)
99	ERROR	I	“PLL lock error, data error flag input from DIR (IC1101)”
100	XSTATE	I	Source clock selection monitor input from DIR (IC1101)

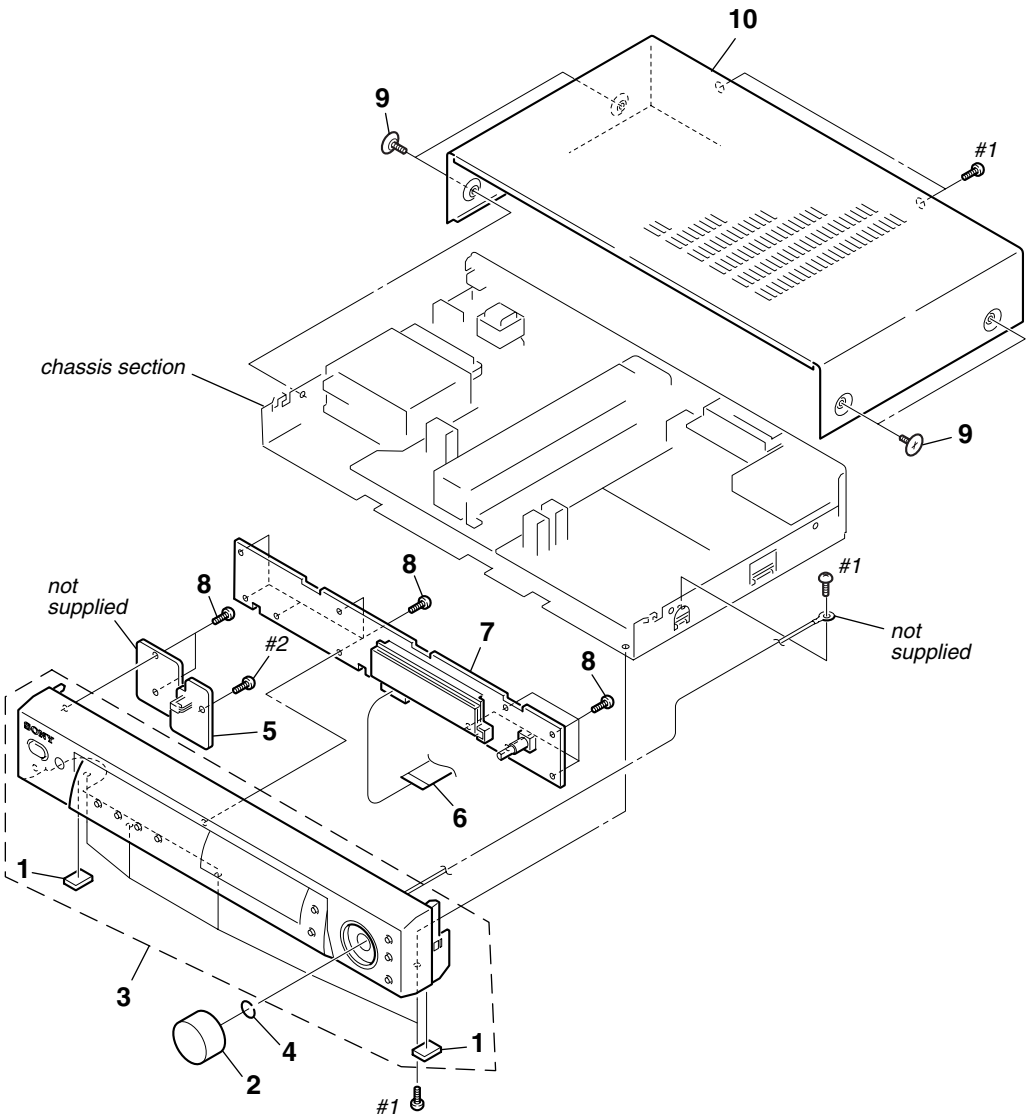
SECTION 4
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

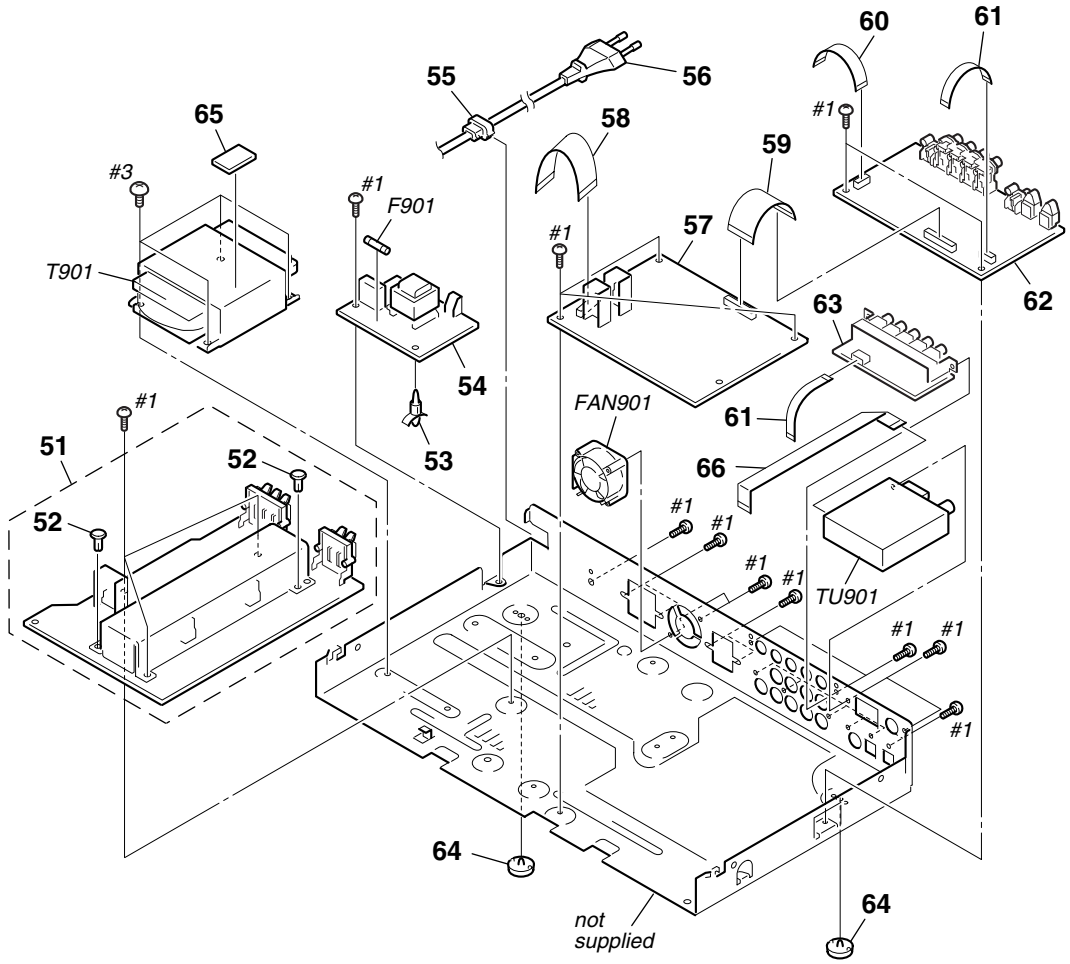
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

4-1. Front Panel Section



Ref. No.	Part No.	Description	Remarks
1	4-977-358-01	CUSHION	
2	4-241-511-01	KNOB (VOL)	
3	X-4954-992-1	PANEL ASSY, FRONT	
4	3-354-981-11	SPRING (SUS), RING	
5	1-685-654-11	IR BOARD	
6	1-773-045-11	WIRE (FLAT TYPE) (17 CORE)	
7	A-4729-864-A	DISPLAY BOARD, COMPLETE	
8	4-951-620-01	SCREW (2.6X8), +BVTP	
9	3-070-883-11	SCREW, TAPPING	
10	4-241-509-01	CASE	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-133-19	SCREW +P 2.6X6 TYPE2 SLIT	

4-2. Chassis Section



Ref. No.	Part No.	Description	Remarks
51	A-4729-851-A	AMPLIFIER BOARD, COMPLETE	
52	3-531-576-11	RIVET	
53	4-943-687-01	HOLDER, PC BOARD	
54	1-685-650-11	STANDBY BOARD	
* 55	3-703-244-00	BUSHING (2104), CORD	
⚠56	1-777-071-22	CORD, POWER	
57	A-4729-847-A	DIGITAL BOARD, COMPLETE	
58	1-773-106-11	WIRE (FLAT TYPE) (19 CORE)	
59	1-773-207-11	WIRE (FLAT TYPE) (25 CORE)	
60	1-769-904-11	WIRE (FLAT TYPE) (9 CORE)	
61	1-769-876-11	WIRE (FLAT TYPE) (7 CORE)	
62	A-4729-852-A	INPUT BOARD, COMPLETE	
63	1-685-653-11	VIDEO BOARD	

Ref. No.	Part No.	Description	Remarks
64	4-965-822-01	FOOT	
65	4-214-557-21	CUSHION	
66	1-765-325-11	WIRE (FLAT TYPE) (11 CORE)	
⚠F901	1-532-463-51	FUSE 1A/250V	
FAN901	1-763-561-22	FAN, D.C.	
⚠T901	1-437-862-11	TRANSFORMER, POWER	
TU901	1-693-580-21	TUNER	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-880-09	SCREW +BVTT 4X6 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
	A-4729-851-A	AMPLIFIER BOARD, COMPLETE			
		**********			
	3-531-576-11	RIVET			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3			
	7-685-872-09	SCREW +BVTT 3X8 (S)			
		< CAPACITOR >			
C501	1-126-963-11	ELECT	4.7uF	20.00%	50V
C502	1-162-282-31	CERAMIC	100PF	10%	50V
C503	1-162-282-31	CERAMIC	100PF	10%	50V
C504	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C506	1-126-960-11	ELECT	1uF	20.00%	50V
C507	1-113-342-11	CERAMIC	0.1uF		50V
C508	1-126-960-11	ELECT	1uF	20.00%	50V
C509	1-126-933-11	ELECT	100uF	20.00%	16V
C510	1-113-342-11	CERAMIC	0.1uF		50V
C511	1-136-157-00	FILM	0.022uF	5.00%	50V
C561	1-126-963-11	ELECT	4.7uF	20.00%	50V
C562	1-126-960-11	ELECT	1uF	20.00%	50V
C563	1-126-960-11	ELECT	1uF	20.00%	50V
C564	1-126-963-11	ELECT	4.7uF	20.00%	50V
C565	1-126-933-11	ELECT	100uF	20.00%	16V
C601	1-126-963-11	ELECT	4.7uF	20.00%	50V
C602	1-162-282-31	CERAMIC	100PF	10%	50V
C603	1-162-282-31	CERAMIC	100PF	10%	50V
C604	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C606	1-126-960-11	ELECT	1uF	20.00%	50V
C607	1-113-342-11	CERAMIC	0.1uF		50V
C608	1-126-960-11	ELECT	1uF	20.00%	50V
C609	1-126-933-11	ELECT	100uF	20.00%	16V
C610	1-113-342-11	CERAMIC	0.1uF		50V
C611	1-136-157-00	FILM	0.022uF	5.00%	50V
C641	1-130-483-00	MYLAR	0.01uF	5%	50V
C642	1-130-483-00	MYLAR	0.01uF	5%	50V
C643	1-130-483-00	MYLAR	0.01uF	5%	50V
C651	1-126-963-11	ELECT	4.7uF	20.00%	50V
C652	1-162-282-31	CERAMIC	100PF	10%	50V
C653	1-162-282-31	CERAMIC	100PF	10%	50V
C654	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C656	1-126-960-11	ELECT	1uF	20.00%	50V
C657	1-113-342-11	CERAMIC	0.1uF		50V
C658	1-126-960-11	ELECT	1uF	20.00%	50V
C659	1-126-933-11	ELECT	100uF	20.00%	16V
C660	1-113-342-11	CERAMIC	0.1uF		50V
C661	1-136-157-00	FILM	0.022uF	5.00%	50V
C701	1-126-963-11	ELECT	4.7uF	20.00%	50V
C702	1-162-282-31	CERAMIC	100PF	10%	50V
C703	1-162-282-31	CERAMIC	100PF	10%	50V
C704	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C706	1-126-960-11	ELECT	1uF	20.00%	50V
C707	1-113-342-11	CERAMIC	0.1uF		50V
C708	1-126-960-11	ELECT	1uF	20.00%	50V
C709	1-126-933-11	ELECT	100uF	20.00%	16V
C710	1-113-342-11	CERAMIC	0.1uF		50V
C711	1-136-157-00	FILM	0.022uF	5.00%	50V
C730	1-126-934-11	ELECT	220uF	20.00%	10V
C732	1-136-165-00	FILM	0.1uF	5.00%	50V
C741	1-130-483-00	MYLAR	0.01uF	5%	50V
C751	1-126-963-11	ELECT	4.7uF	20.00%	50V
C752	1-162-282-31	CERAMIC	100PF	10%	50V
C753	1-162-282-31	CERAMIC	100PF	10%	50V
C754	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C756	1-126-960-11	ELECT	1uF	20.00%	50V
C757	1-113-342-11	CERAMIC	0.1uF		50V
C758	1-126-960-11	ELECT	1uF	20.00%	50V
C759	1-126-933-11	ELECT	100uF	20.00%	16V
C760	1-113-342-11	CERAMIC	0.1uF		50V
C761	1-136-157-00	FILM	0.022uF	5.00%	50V
C791	1-130-483-00	MYLAR	0.01uF	5%	50V
C801	1-136-169-00	MYLAR	0.22uF	5.00%	50V
C802	1-136-169-00	MYLAR	0.22uF	5.00%	50V
C811	1-126-943-11	ELECT	2200uF	20.00%	25V
C812	1-126-942-61	ELECT	1000uF	20.00%	25V
C813	1-101-001-00	CERAMIC	0.001uF		50V
C814	1-101-001-00	CERAMIC	0.001uF		50V
C815	1-130-495-00	MYLAR	0.1uF	5%	50V
C816	1-130-495-00	MYLAR	0.1uF	5%	50V
C817	1-126-936-11	ELECT	3300uF	20.00%	16V
C818	1-126-955-11	ELECT	4700uF	20.00%	35V
C819	1-126-955-11	ELECT	4700uF	20.00%	35V
C820	1-126-948-11	ELECT	100uF	20.00%	35V
C821	1-126-967-11	ELECT	47uF	20.00%	50V
C871	1-126-933-11	ELECT	100uF	20.00%	16V
		< CONNECTOR >			
CN801	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
* CN802	1-564-508-11	PLUG, CONNECTOR 5P			
CN820	1-770-479-11	PLUG,CONNECTOR PIN(PC BOARD)4P			
CN821	1-784-922-11	PIN, CONNECTOR 5P			
CN822	1-784-780-11	CONNECTOR, FFC 19P			
CN823	1-568-828-11	CONNECTOR, FFC 9P			
CN861	1-779-978-11	PIN, CONNECTOR 3P			

AMPLIFIER

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D520	8-719-911-19	DIODE 1SS133T-72	
D521	8-719-911-19	DIODE 1SS133T-72	
D550	8-719-911-19	DIODE 1SS133T-72	
D620	8-719-911-19	DIODE 1SS133T-72	
D621	8-719-911-19	DIODE 1SS133T-72	
D720	8-719-911-19	DIODE 1SS133T-72	
D721	8-719-911-19	DIODE 1SS133T-72	
D731	8-719-911-19	DIODE 1SS133T-72	
D801	8-719-024-99	DIODE 11ES2-NTA2B	
D802	8-719-024-99	DIODE 11ES2-NTA2B	
D803	8-719-024-99	DIODE 11ES2-NTA2B	
D804	8-719-024-99	DIODE 11ES2-NTA2B	
D805	8-719-024-99	DIODE 11ES2-NTA2B	
D806	8-719-024-99	DIODE 11ES2-NTA2B	
D807	8-719-024-99	DIODE 11ES2-NTA2B	
D808	8-719-024-99	DIODE 11ES2-NTA2B	
D809	8-719-028-23	DIODE D3SBA20-4101	
D810	8-719-024-99	DIODE 11ES2-NTA2B	
D811	8-719-024-99	DIODE 11ES2-NTA2B	
D812	8-719-934-21	DIODE HZS30-1LTA	
D813	8-719-109-85	DIODE MTZJ-T-72-5.1B	
		< IC >	
IC501	8-759-502-33	IC SI-18752	
IC601	8-759-502-33	IC SI-18752	
IC651	8-759-502-33	IC SI-18752	
IC701	8-759-502-33	IC SI-18752	
IC751	8-759-502-33	IC SI-18752	
		< COIL >	
L507	1-422-009-13	COIL, AIR-CORE	
L607	1-422-009-13	COIL, AIR-CORE	
L657	1-422-009-13	COIL, AIR-CORE	
L707	1-422-009-13	COIL, AIR-CORE	
L757	1-422-009-13	COIL, AIR-CORE	
		< TRANSISTOR >	
Q520	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q550	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q551	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q620	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q720	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q730	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q731	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
Q732	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA	
Q861	8-729-140-97	TRANSISTOR 2SB734-T-34	
Q862	8-729-900-63	TRANSISTOR BN1F4M-TP	
Q863	8-729-900-63	TRANSISTOR BN1F4M-TP	
Q864	8-729-111-29	TRANSISTOR 2SD1616-TP-LK	
Q865	8-729-900-63	TRANSISTOR BN1F4M-TP	
Q866	8-729-900-63	TRANSISTOR BN1F4M-TP	
		< RESISTOR >	
R501	1-247-807-31	CARBON 100 5% 1/4W	
R502	1-249-433-11	CARBON 22K 5% 1/4W	
R503	1-249-407-11	CARBON 150 5% 1/4W	F
R504	1-249-407-11	CARBON 150 5% 1/4W	F
R505	1-249-433-11	CARBON 22K 5% 1/4W	
R507	1-249-389-11	CARBON 4.7 5% 1/4W	F
R508	1-249-437-11	CARBON 47K 5% 1/4W	
R509	1-249-393-11	CARBON 10 5% 1/4W	F
R510	1-249-434-11	CARBON 27K 5% 1/4W	
R522	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R540	1-249-401-11	CARBON 47 5% 1/4W	F
R551	1-249-441-11	CARBON 100K 5% 1/4W	
R552	1-247-843-11	CARBON 3.3K 5% 1/4W	
R553	1-249-429-11	CARBON 10K 5% 1/4W	
R554	1-249-416-11	CARBON 820 5% 1/4W	F
R555	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R556	1-249-439-11	CARBON 68K 5% 1/4W	
R557	1-247-887-00	CARBON 220K 5% 1/4W	
R558	1-249-441-11	CARBON 100K 5% 1/4W	
R601	1-247-807-31	CARBON 100 5% 1/4W	
R602	1-249-433-11	CARBON 22K 5% 1/4W	
R603	1-249-407-11	CARBON 150 5% 1/4W	F
R604	1-249-407-11	CARBON 150 5% 1/4W	F
R605	1-249-433-11	CARBON 22K 5% 1/4W	
R607	1-249-389-11	CARBON 4.7 5% 1/4W	F
R608	1-249-437-11	CARBON 47K 5% 1/4W	
R609	1-249-393-11	CARBON 10 5% 1/4W	F
R610	1-249-434-11	CARBON 27K 5% 1/4W	
R622	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R640	1-249-401-11	CARBON 47 5% 1/4W	F
⚠R641	1-249-393-11	CARBON 10 5% 1/4W	F
⚠R642	1-249-393-11	CARBON 10 5% 1/4W	F
⚠R643	1-249-393-11	CARBON 10 5% 1/4W	F
R651	1-247-807-31	CARBON 100 5% 1/4W	
R652	1-249-433-11	CARBON 22K 5% 1/4W	
R653	1-249-407-11	CARBON 150 5% 1/4W	F
R654	1-249-407-11	CARBON 150 5% 1/4W	F
R655	1-249-433-11	CARBON 22K 5% 1/4W	
R657	1-249-389-11	CARBON 4.7 5% 1/4W	F
R658	1-249-437-11	CARBON 47K 5% 1/4W	
R659	1-249-393-11	CARBON 10 5% 1/4W	F
R660	1-249-434-11	CARBON 27K 5% 1/4W	
R701	1-247-807-31	CARBON 100 5% 1/4W	
R702	1-249-433-11	CARBON 22K 5% 1/4W	
R703	1-249-407-11	CARBON 150 5% 1/4W	F
R704	1-249-407-11	CARBON 150 5% 1/4W	F
R705	1-249-433-11	CARBON 22K 5% 1/4W	
R707	1-249-389-11	CARBON 4.7 5% 1/4W	F
R708	1-249-437-11	CARBON 47K 5% 1/4W	
R709	1-249-393-11	CARBON 10 5% 1/4W	F
R710	1-249-434-11	CARBON 27K 5% 1/4W	
R722	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R730	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R731	1-249-429-11	CARBON 10K 5% 1/4W	
R732	1-249-435-11	CARBON 33K 5% 1/4W	
R733	1-249-437-11	CARBON 47K 5% 1/4W	
R740	1-249-401-11	CARBON 47 5% 1/4W	F
⚠R741	1-249-393-11	CARBON 10 5% 1/4W	F

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
R750	1-249-417-11	CARBON	1K	5%	1/4W F
R751	1-247-807-31	CARBON	100	5%	1/4W
R752	1-249-433-11	CARBON	22K	5%	1/4W
R753	1-249-407-11	CARBON	150	5%	1/4W F
R754	1-249-407-11	CARBON	150	5%	1/4W F
R755	1-249-433-11	CARBON	22K	5%	1/4W
R757	1-249-389-11	CARBON	4.7	5%	1/4W F
R758	1-249-437-11	CARBON	47K	5%	1/4W
R759	1-249-393-11	CARBON	10	5%	1/4W F
R760	1-249-434-11	CARBON	27K	5%	1/4W
⚠R791	1-249-393-11	CARBON	10	5%	1/4W F
⚠R831	1-249-409-11	CARBON	220	5%	1/4W F
R832	1-249-433-11	CARBON	22K	5%	1/4W
R881	1-249-419-11	CARBON	1.5K	5%	1/4W F
R882	1-249-417-11	CARBON	1K	5%	1/4W F
R883	1-247-839-81	CARBON	2.2K	5%	1/4W
R884	1-249-429-11	CARBON	10K	5%	1/4W
R885	1-247-807-31	CARBON	100	5%	1/4W
R886	1-249-429-11	CARBON	10K	5%	1/4W
R887	1-249-425-11	CARBON	4.7K	5%	1/4W F
R888	1-247-807-31	CARBON	100	5%	1/4W
⚠R910	1-249-443-11	CARBON	0.47	5%	1/4W
		< RELAY >			
RY501	1-755-170-11	RELAY (12V)			
RY601	1-755-170-11	RELAY (12V)			
RY701	1-755-170-11	RELAY (12V)			
		< TERMINAL >			
TM601	1-694-674-12	TERMINAL BOARD (6P) (SPEAKERS REAR/CENTER)			
TM701	1-694-677-12	TERMINAL BOARD (4P) (SPEAKERS FRONT)			
**********					
	A-4729-847-A	DIGITAL BOARD, COMPLETE **********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
		< CAPACITOR >			
C1101	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1102	1-126-947-11	ELECT	47uF	20.00%	16V
C1103	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1104	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1105	1-126-947-11	ELECT	47uF	20.00%	16V
C1106	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1107	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1108	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1109	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C1110	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C1111	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1112	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1113	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1129	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V
C1131	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1201	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1202	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1203	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1204	1-164-156-11	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remarks
C1205	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1206	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1207	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1208	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1209	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1210	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1211	1-126-935-11	ELECT	470uF	20.00%	10V
C1212	1-126-935-11	ELECT	470uF	20.00%	10V
C1213	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1214	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1216	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1218	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1219	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1220	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1227	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1229	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1230	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1231	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1309	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1310	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1311	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1501	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C1502	1-126-965-91	ELECT	22uF	20.00%	50V
C1503	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1504	1-126-964-11	ELECT	10uF	20.00%	50V
C1505	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1506	1-126-935-11	ELECT	470uF	20.00%	10V
C1507	1-126-964-11	ELECT	10uF	20.00%	50V
C1508	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1509	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1510	1-126-947-11	ELECT	47uF	20.00%	16V
C1511	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1512	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V
C1513	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1514	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1515	1-126-964-11	ELECT	10uF	20.00%	50V
C1522	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1551	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C1552	1-126-965-91	ELECT	22uF	20.00%	50V
C1601	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1602	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1603	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1604	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1605	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1606	1-126-947-11	ELECT	47uF	20.00%	16V
C1610	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1611	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1612	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1615	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C1616	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C1617	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1618	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1619	1-164-156-11	CERAMIC CHIP	0.1uF		25V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

DIGITAL

Ref. No.	Part No.	Description			Remarks
C1626	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1627	1-126-964-11	ELECT	10uF	20.00%	50V
C1635	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1640	1-128-934-91	CERAMIC CHIP	0.33uF	20%	10V
C1905	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1906	1-126-935-11	ELECT	470uF	20.00%	10V
C1908	1-126-935-11	ELECT	470uF	20.00%	10V
C1909	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1910	1-126-935-11	ELECT	470uF	20.00%	10V
C1911	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1912	1-126-935-11	ELECT	470uF	20.00%	10V
C1913	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1914	1-126-947-11	ELECT	47uF	20.00%	16V
		< CONNECTOR >			
CN6	1-784-780-11	CONNECTOR, FFC 19P			
CN7	1-568-830-11	CONNECTOR, FFC 11P			
CN9	1-568-826-11	CONNECTOR, FFC 7P			
CNS1	1-784-786-11	CONNECTOR, FFC 25P			
* CNS3	1-784-923-11	PIN, CONNECTOR 7P			
CNS4	1-784-778-11	CONNECTOR, FFC 17P			
		< DIODE >			
D1101	8-719-016-74	DIODE 1SS352-TPH3			
D1501	8-719-049-09	DIODE 1SS367-T3SONY			
D1502	8-719-049-09	DIODE 1SS367-T3SONY			
D1601	8-719-016-74	DIODE 1SS352-TPH3			
D1905	8-719-053-18	DIODE 1SR154-400TE-25			
D1906	8-719-053-18	DIODE 1SR154-400TE-25			
D1907	8-719-053-18	DIODE 1SR154-400TE-25			
		< FERRITE BEAD >			
FB1102	1-414-813-11	FERRITE	0UH		
FB1104	1-469-152-11	FERRITE	0UH		
FB1105	1-469-152-11	FERRITE	0UH		
FB1201	1-414-813-11	FERRITE	0UH		
FB1203	1-469-152-11	FERRITE	0UH		
FB1204	1-469-152-11	FERRITE	0UH		
FB1205	1-469-450-21	INDUCTOR	0UH		
FB1501	1-414-813-11	FERRITE	0UH		
FB1502	1-414-813-11	FERRITE	0UH		
FB1601	1-414-813-11	FERRITE	0UH		
FB1602	1-216-864-11	METAL CHIP	0	5%	1/16W
FB1603	1-216-864-11	METAL CHIP	0	5%	1/16W
		< EARTH TERMINAL >			
* G1101	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC1101	8-759-825-15	IC LC89056W-E			
IC1201	8-759-698-76	IC CXD9617R			
IC1202	6-700-983-01	IC IS61LV6416-15T(ICSI)			
IC1501	8-759-657-47	IC AK4527			
IC1502	8-759-710-97	IC NJM4565M(TE2)			
IC1503	8-759-231-53	IC TA7805S			
IC1552	8-759-710-97	IC NJM4565M(TE2)			

Ref. No.	Part No.	Description			Remarks
IC1601	6-802-028-01	IC MB90478PF-G-129-BND			
IC1602	8-759-714-20	IC S-80929ANMP-DDS-T2			
IC1604	8-759-641-86	IC BR24C16F-E2			
IC1901	6-701-887-01	IC SI-3001KWF			
IC1902	8-759-473-41	IC BA10T			
IC1903	8-759-647-11	IC uPC2905HF			
IC1904	8-759-647-10	IC uPC2933HF			
		< JUMPER RESISTOR >			
JR1103	1-216-864-11	METAL CHIP	0	5%	1/16W
JR1104	1-216-864-11	METAL CHIP	0	5%	1/16W
JR1118	1-211-950-11	SHORT CHIP	0		
JR1121	1-216-864-11	METAL CHIP	0	5%	1/16W
JR1200	1-211-950-11	SHORT CHIP	0		
JR1210	1-216-864-11	METAL CHIP	0	5%	1/16W
		< COIL >			
L1901	1-216-864-11	METAL CHIP	0	5%	1/16W
		< TRANSISTOR >			
Q1601	8-729-421-22	TRANSISTOR	UN2211-TX		
Q1602	8-729-230-49	TRANSISTOR	2SC2712-YG-TE85L		
		< RESISTOR >			
R1100	1-216-857-11	METAL CHIP	1M	5%	1/16W
R1101	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1102	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1103	1-216-809-11	METAL CHIP	100	5%	1/16W
R1104	1-216-809-11	METAL CHIP	100	5%	1/16W
R1105	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1106	1-216-839-11	METAL CHIP	33K	5%	1/16W
R1107	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R1108	1-216-809-11	METAL CHIP	100	5%	1/16W
R1110	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1111	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1112	1-216-809-11	METAL CHIP	100	5%	1/16W
R1113	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1114	1-216-809-11	METAL CHIP	100	5%	1/16W
R1115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1124	1-216-809-11	METAL CHIP	100	5%	1/16W
R1202	1-216-864-11	METAL CHIP	0	5%	1/16W
R1203	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1204	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1205	1-216-809-11	METAL CHIP	100	5%	1/16W
R1206	1-216-809-11	METAL CHIP	100	5%	1/16W
R1207	1-216-809-11	METAL CHIP	100	5%	1/16W
R1208	1-216-809-11	METAL CHIP	100	5%	1/16W
R1209	1-216-864-11	METAL CHIP	0	5%	1/16W
R1210	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1212	1-216-813-11	METAL CHIP	220	5%	1/16W
R1213	1-216-813-11	METAL CHIP	220	5%	1/16W
R1214	1-216-813-11	METAL CHIP	220	5%	1/16W
R1215	1-216-813-11	METAL CHIP	220	5%	1/16W
R1216	1-216-813-11	METAL CHIP	220	5%	1/16W
R1217	1-216-813-11	METAL CHIP	220	5%	1/16W
R1218	1-216-813-11	METAL CHIP	220	5%	1/16W
R1219	1-216-813-11	METAL CHIP	220	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R1220	1-216-813-11	METAL CHIP	220	5%	1/16W
R1221	1-216-813-11	METAL CHIP	220	5%	1/16W
R1222	1-216-813-11	METAL CHIP	220	5%	1/16W
R1304	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1305	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1308	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1314	1-216-864-11	METAL CHIP	0	5%	1/16W
R1364	1-216-864-11	METAL CHIP	0	5%	1/16W
R1501	1-216-815-11	METAL CHIP	330	5%	1/16W
R1502	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1503	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1504	1-216-815-11	METAL CHIP	330	5%	1/16W
R1505	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R1506	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1507	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1508	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1509	1-216-809-11	METAL CHIP	100	5%	1/16W
R1516	1-216-864-11	METAL CHIP	0	5%	1/16W
R1517	1-216-864-11	METAL CHIP	0	5%	1/16W
R1518	1-216-864-11	METAL CHIP	0	5%	1/16W
R1519	1-216-864-11	METAL CHIP	0	5%	1/16W
R1520	1-216-864-11	METAL CHIP	0	5%	1/16W
R1521	1-216-864-11	METAL CHIP	0	5%	1/16W
R1551	1-216-815-11	METAL CHIP	330	5%	1/16W
R1552	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1553	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1554	1-216-815-11	METAL CHIP	330	5%	1/16W
R1555	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R1556	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1557	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1600	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1601	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1602	1-216-809-11	METAL CHIP	100	5%	1/16W
R1603	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1604	1-216-809-11	METAL CHIP	100	5%	1/16W
R1605	1-216-809-11	METAL CHIP	100	5%	1/16W
R1606	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1607	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1608	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1609	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1610	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1611	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1612	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1613	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1614	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1615	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1616	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1617	1-216-809-11	METAL CHIP	100	5%	1/16W
R1618	1-216-809-11	METAL CHIP	100	5%	1/16W
R1619	1-216-809-11	METAL CHIP	100	5%	1/16W
R1620	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1621	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1624	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1625	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1626	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1627	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1628	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R1629	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1630	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1631	1-216-809-11	METAL CHIP	100	5%	1/16W
R1632	1-216-864-11	METAL CHIP	0	5%	1/16W
R1635	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1636	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1637	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1638	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1639	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1640	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1641	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1642	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1643	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1644	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1645	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1646	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1647	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1648	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1649	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1650	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1651	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1655	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1656	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1657	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1658	1-216-809-11	METAL CHIP	100	5%	1/16W
R1659	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1660	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1662	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R1663	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R1664	1-216-809-11	METAL CHIP	100	5%	1/16W
R1665	1-216-809-11	METAL CHIP	100	5%	1/16W
R1666	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1667	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1671	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1672	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1673	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1674	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1676	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1677	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1678	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1679	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1680	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1681	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1682	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1683	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1684	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1685	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1686	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1687	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1688	1-216-809-11	METAL CHIP	100	5%	1/16W
R1689	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1690	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1694	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1697	1-216-864-11	METAL CHIP	0	5%	1/16W
R1698	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1699	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1703	1-216-833-11	METAL CHIP	10K	5%	1/16W

DIGITAL DISPLAY INPUT

Ref. No.	Part No.	Description			Remarks
R1704	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1707	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1708	1-216-833-11	METAL CHIP	10K	5%	1/16W
		< VIBRATOR >			
X1101	1-795-126-21	VIBRATOR, CRYSTAL 12.288MHz			
X1201	1-795-297-21	VIBRATOR, CERAMIC 13.5MHz			
X1601	1-781-356-21	VIBRATOR, CERAMIC 16MHz			
**********					
	A-4729-864-A	DISPLAY BOARD, COMPLETE			
		**********			
*	3-386-245-13	HOLDER (FL)			
*	4-921-941-01	CUSHION (FL)			
		< CAPACITOR >			
C141	1-126-964-11	ELECT	10uF	20.00%	50V
C142	1-127-888-11	CERAMIC	0.1uF	10%	50V
C143	1-162-294-11	CERAMIC	1000PF	10%	50V
C150	1-127-888-11	CERAMIC	0.1uF	10%	50V
C151	1-126-964-11	ELECT	10uF	20.00%	50V
C152	1-162-282-31	CERAMIC	100PF	10%	50V
C153	1-162-215-31	CERAMIC	47PF	5%	50V
C154	1-162-215-31	CERAMIC	47PF	5%	50V
C155	1-162-294-11	CERAMIC	1000PF	10%	50V
C156	1-162-294-11	CERAMIC	1000PF	10%	50V
C157	1-126-964-11	ELECT	10uF	20.00%	50V
C158	1-127-888-11	CERAMIC	0.1uF	10%	50V
C159	1-127-888-11	CERAMIC	0.1uF	10%	50V
		< CONNECTOR >			
CN151	1-784-778-11	CONNECTOR, FFC 17P			
CN152	1-784-921-11	PIN, CONNECTOR 4P			
		< DIODE >			
D151	8-719-058-64	DIODE SEL5823A-TP15 (VIDEO)			
D152	8-719-058-64	DIODE SEL5823A-TP15 (DVD)			
D153	8-719-058-64	DIODE SEL5823A-TP15 (TV/SAT)			
D154	8-719-058-64	DIODE SEL5823A-TP15 (TUNER FM/AM)			
		< FLUORESCENT INDICATOR TUBE >			
FL101	1-518-831-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC101	8-759-036-90	IC MC74ACT08N			
IC152	8-759-643-83	IC uPD16315GB-3BS			
		< COIL >			
L102	1-410-525-11	INDUCTOR	220uH		
		< RESISTOR >			
R161	1-249-417-11	CARBON	1K	5%	1/4W F
R162	1-249-417-11	CARBON	1K	5%	1/4W F
R163	1-249-413-11	CARBON	470	5%	1/4W F
R176	1-249-409-11	CARBON	220	5%	1/4W F
R178	1-249-440-11	CARBON	82K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R191	1-249-413-11	CARBON	470	5%	1/4W F
R192	1-249-417-11	CARBON	1K	5%	1/4W F
R193	1-249-417-11	CARBON	1K	5%	1/4W F
R194	1-249-421-11	CARBON	2.2K	5%	1/4W F
		< VARIABLE RESISTOR >			
RV101	1-418-725-41	ENCODER, ROTARY (12 TYPE) (MASTER VOLUME)			
		< SWITCH >			
S101	1-771-349-21	SWITCH, KEYBOARD (VIDEO)			
S102	1-771-349-21	SWITCH, KEYBOARD (DVD)			
S103	1-771-349-21	SWITCH, KEYBOARD (TV/SAT)			
S104	1-771-349-21	SWITCH, KEYBOARD (TUNER FM/AM)			
S111	1-771-349-21	SWITCH, KEYBOARD (PL II)			
S112	1-771-349-21	SWITCH, KEYBOARD (SOUND FIELD)			
S113	1-771-349-21	SWITCH, KEYBOARD (MUTING)			
S114	1-771-349-21	SWITCH, KEYBOARD (PRESET TUNING +)			
S115	1-771-349-21	SWITCH, KEYBOARD (PRESET TUNING -)			
**********					
	A-4729-852-A	INPUT BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-127-888-11	CERAMIC	0.1uF	10%	50V
C302	1-127-888-11	CERAMIC	0.1uF	10%	50V
C303	1-162-294-31	CERAMIC	0.001uF	10%	50V
C304	1-127-888-11	CERAMIC	0.1uF	10%	50V
C305	1-126-965-91	ELECT	22uF	20.00%	50V
C306	1-127-888-11	CERAMIC	0.1uF	10%	50V
C307	1-162-187-31	CERAMIC	1PF	20.00%	50V
C309	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C310	1-127-888-11	CERAMIC	0.1uF	10%	50V
C311	1-126-964-11	ELECT	10uF	20.00%	50V
C371	1-161-494-00	CERAMIC	0.022uF		25V
C372	1-161-494-00	CERAMIC	0.022uF		25V
C373	1-161-494-00	CERAMIC	0.022uF		25V
C374	1-127-888-11	CERAMIC	0.1uF	10%	50V
C375	1-161-494-00	CERAMIC	0.022uF		25V
C376	1-161-494-00	CERAMIC	0.022uF		25V
C404	1-126-964-11	ELECT	10uF	20.00%	50V
C405	1-126-964-11	ELECT	10uF	20.00%	50V
C406	1-126-964-11	ELECT	10uF	20.00%	50V
C408	1-126-964-11	ELECT	10uF	20.00%	50V
C413	1-126-964-11	ELECT	10uF	20.00%	50V
C414	1-126-964-11	ELECT	10uF	20.00%	50V
C415	1-126-964-11	ELECT	10uF	20.00%	50V
C416	1-126-964-11	ELECT	10uF	20.00%	50V
C417	1-126-964-11	ELECT	10uF	20.00%	50V
C418	1-126-964-11	ELECT	10uF	20.00%	50V
C419	1-126-964-11	ELECT	10uF	20.00%	50V
C433	1-126-964-11	ELECT	10uF	20.00%	50V
C440	1-127-888-11	CERAMIC	0.1uF	10%	50V
C441	1-127-888-11	CERAMIC	0.1uF	10%	50V
C442	1-104-665-11	ELECT	100uF	20.00%	10V
C443	1-104-665-11	ELECT	100uF	20.00%	10V
C444	1-127-888-11	CERAMIC	0.1uF	10%	50V
C445	1-127-888-11	CERAMIC	0.1uF	10%	50V

Ref. No.	Part No.	Description			Remarks
C446	1-126-947-11	ELECT	47uF	20.00%	25V
C447	1-126-947-11	ELECT	47uF	20.00%	25V
C454	1-126-964-11	ELECT	10uF	20.00%	50V
C455	1-126-964-11	ELECT	10uF	20.00%	50V
C456	1-126-964-11	ELECT	10uF	20.00%	50V
C458	1-126-964-11	ELECT	10uF	20.00%	50V
C464	1-127-888-11	CERAMIC	0.1uF	10%	50V
C465	1-126-934-11	ELECT	220uF	20.00%	10V
C466	1-126-964-11	ELECT	10uF	20.00%	50V
C467	1-127-888-11	CERAMIC	0.1uF	10%	50V
C471	1-126-963-11	ELECT	4.7uF	20.00%	50V
C472	1-126-963-11	ELECT	4.7uF	20.00%	50V
C481	1-126-964-11	ELECT	10uF	20.00%	50V
C482	1-126-964-11	ELECT	10uF	20.00%	50V
C483	1-126-964-11	ELECT	10uF	20.00%	50V
C484	1-126-964-11	ELECT	10uF	20.00%	50V
C485	1-126-964-11	ELECT	10uF	20.00%	50V
C486	1-126-964-11	ELECT	10uF	20.00%	50V
C487	1-126-964-11	ELECT	10uF	20.00%	50V
C488	1-127-888-11	CERAMIC	0.1uF	10%	50V
C489	1-128-809-11	CERAMIC	100PF	5%	50V
C490	1-128-809-11	CERAMIC	100PF	5%	50V
C491	1-126-964-11	ELECT	10uF	20.00%	50V
C492	1-126-964-11	ELECT	10uF	20.00%	50V
C493	1-126-964-11	ELECT	10uF	20.00%	50V
C494	1-126-964-11	ELECT	10uF	20.00%	50V
C495	1-126-964-11	ELECT	10uF	20.00%	50V
C496	1-126-963-11	ELECT	4.7uF	20.00%	50V
C497	1-128-809-11	CERAMIC	100PF	5%	50V
C498	1-162-211-31	CERAMIC	33PF	5%	50V
C499	1-127-888-11	CERAMIC	0.1uF	10%	50V
CC04	1-128-809-11	CERAMIC	100PF	5%	50V
CC05	1-128-809-11	CERAMIC	100PF	5%	50V
CC06	1-128-809-11	CERAMIC	100PF	5%	50V
CC08	1-128-809-11	CERAMIC	100PF	5%	50V
CC54	1-128-809-11	CERAMIC	100PF	5%	50V
CC55	1-128-809-11	CERAMIC	100PF	5%	50V
CC56	1-128-809-11	CERAMIC	100PF	5%	50V
CC58	1-128-809-11	CERAMIC	100PF	5%	50V
		< CONNECTOR >			
CN301	1-568-826-11	CONNECTOR, FFC 7P			
CN401	1-568-828-11	CONNECTOR, FFC 9P			
CN402	1-568-826-11	CONNECTOR, FFC 7P			
CN403	1-784-786-11	CONNECTOR, FFC 25P			
		< DIODE >			
D301	8-719-911-19	DIODE 1SS133T-72			
D401	8-719-043-76	DIODE AK04V1			
D403	8-719-043-76	DIODE AK04V1			
D405	8-719-911-19	DIODE 1SS133T-72			
		< FERRITE BEAD >			
FB301	1-410-396-41	FERRITE	0.45UH		
FB302	1-410-396-41	FERRITE	0.45UH		

Ref. No.	Part No.	Description			
		< IC >			
IC301	6-600-014-01	IC TORX141L (DIGITAL SAT OPTICAL)			
IC302	6-600-014-01	IC TORX141L (DIGITAL DVD OPTICAL)			
IC303	8-759-238-11	IC TC74HCU04AF (EL)			
IC401	6-701-567-01	IC M61511FP-R61G			
IC402	8-759-636-74	IC NJM4565DD			
IC403	8-759-649-68	IC uPC78M07AHF			
IC404	8-759-604-95	IC M5F79M07L			
IC405	8-759-701-75	IC NJM7805FA			
IC406	8-759-701-65	IC NJM79M05FA			
		< JACK >			
J301	1-778-228-11	JACK, PIN 1P (DIGITAL DVD COAX)			
J401	1-770-614-11	JACK, PIN 4P (VIDEO IN)			
J402	1-770-614-11	JACK, PIN 4P (TV/SAT/DVD IN)			
J403	1-770-377-31	JACK, PIN 1P (SUB WOOFER)			
		< TRANSISTOR >			
Q361	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q362	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q363	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q364	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q365	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q366	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q379	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q401	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q402	8-729-119-79	TRANSISTOR	2SC2785TP-FEK		
		< RESISTOR >			
R301	1-247-807-31	CARBON	100	5%	1/4W
R302	1-247-807-31	CARBON	100	5%	1/4W
R303	1-247-804-11	CARBON	75	5%	1/4W
R304	1-249-417-11	CARBON	1K	5%	1/4W F
R305	1-249-433-11	CARBON	22K	5%	1/4W
R306	1-247-897-11	CARBON	560K	5%	1/4W
R307	1-247-807-31	CARBON	100	5%	1/4W
R360	1-249-441-11	CARBON	100K	5%	1/4W
R361	1-249-425-11	CARBON	4.7K	5%	1/4W F
R362	1-249-425-11	CARBON	4.7K	5%	1/4W F
R363	1-249-441-11	CARBON	100K	5%	1/4W
R366	1-249-429-11	CARBON	10K	5%	1/4W
R367	1-249-441-11	CARBON	100K	5%	1/4W
R368	1-249-437-11	CARBON	47K	5%	1/4W
R369	1-249-425-11	CARBON	4.7K	5%	1/4W F
R370	1-249-425-11	CARBON	4.7K	5%	1/4W F
R371	1-249-441-11	CARBON	100K	5%	1/4W
R372	1-249-441-11	CARBON	100K	5%	1/4W
R373	1-249-417-11	CARBON	1K	5%	1/4W F
R374	1-249-417-11	CARBON	1K	5%	1/4W F
R375	1-249-417-11	CARBON	1K	5%	1/4W F
R376	1-249-417-11	CARBON	1K	5%	1/4W F
R377	1-249-417-11	CARBON	1K	5%	1/4W F
R378	1-249-417-11	CARBON	1K	5%	1/4W F
R379	1-249-425-11	CARBON	4.7K	5%	1/4W F
R380	1-249-441-11	CARBON	100K	5%	1/4W
R381	1-249-429-11	CARBON	10K	5%	1/4W
R382	1-247-807-31	CARBON	100	5%	1/4W
R404	1-249-417-11	CARBON	1K	5%	1/4W F

INPUT **IR** **POWER SW** **STANDBY**

Ref. No.	Part No.	Description			Remarks
R405	1-249-417-11	CARBON	1K	5%	1/4W F
R406	1-249-417-11	CARBON	1K	5%	1/4W F
R408	1-249-417-11	CARBON	1K	5%	1/4W F
R413	1-249-437-11	CARBON	47K	5%	1/4W
R414	1-249-437-11	CARBON	47K	5%	1/4W
R417	1-249-437-11	CARBON	47K	5%	1/4W
R418	1-249-437-11	CARBON	47K	5%	1/4W
R419	1-249-437-11	CARBON	47K	5%	1/4W
R420	1-249-437-11	CARBON	47K	5%	1/4W
R421	1-249-437-11	CARBON	47K	5%	1/4W
R424	1-249-437-11	CARBON	47K	5%	1/4W
R425	1-249-437-11	CARBON	47K	5%	1/4W
R426	1-249-437-11	CARBON	47K	5%	1/4W
R441	1-249-437-11	CARBON	47K	5%	1/4W
R444	1-249-437-11	CARBON	47K	5%	1/4W
R445	1-249-437-11	CARBON	47K	5%	1/4W
R446	1-249-437-11	CARBON	47K	5%	1/4W
R454	1-249-417-11	CARBON	1K	5%	1/4W F
R455	1-249-417-11	CARBON	1K	5%	1/4W F
R456	1-249-417-11	CARBON	1K	5%	1/4W F
R458	1-249-417-11	CARBON	1K	5%	1/4W F
R470	1-249-437-11	CARBON	47K	5%	1/4W
R471	1-249-417-11	CARBON	1K	5%	1/4W F
R472	1-249-417-11	CARBON	1K	5%	1/4W F
R473	1-249-421-11	CARBON	2.2K	5%	1/4W F
R474	1-249-428-11	CARBON	8.2K	5%	1/4W
R475	1-249-421-11	CARBON	2.2K	5%	1/4W F
R476	1-249-417-11	CARBON	1K	5%	1/4W F
R477	1-249-425-11	CARBON	4.7K	5%	1/4W F
R478	1-249-437-11	CARBON	47K	5%	1/4W
⚠R479	1-249-381-11	CARBON	1	5%	1/4W F
R480	1-249-437-11	CARBON	47K	5%	1/4W
R499	1-249-437-11	CARBON	47K	5%	1/4W
R560	1-249-429-11	CARBON	10K	5%	1/4W
		< RELAY >			
RY401	1-755-267-11	RELAY			
**********					
	1-685-654-11	IR BOARD			
		********			
		< CAPACITOR >			
C111	1-127-888-11	CERAMIC	0.1uF	10%	50V
C112	1-124-261-00	ELECT	10uF	20%	50V
		< IC >			
IC102	8-749-019-10	IC GP1UD28SXK (R)			
		< RESISTOR >			
R151	1-249-441-11	CARBON	100K	5%	1/4W
R152	1-249-393-11	CARBON	10	5%	1/4W F
R153	1-247-807-31	CARBON	100	5%	1/4W
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Ref. No.	Part No.	Description			Remarks
		POWER SW BOARD			
		**********			
		< SWITCH >			
S118	1-771-349-21	SWITCH, KEYBOARD (I/⏻)			
**********					
	1-685-650-11	STANDBY BOARD			
		**********			
		< CAPACITOR >			
C921	1-161-494-00	CERAMIC	0.022uF		25V
C922	1-161-494-00	CERAMIC	0.022uF		25V
C923	1-126-767-11	ELECT	1000uF	20.00%	16V
C924	1-126-960-11	ELECT	1uF	20.00%	50V
C925	1-127-888-11	CERAMIC	0.1uF	10%	50V
		< CONNECTOR >			
CN903	1-770-480-11	SOCKET, CONNECTOR PIN 4P			
		< CONNECTOR >			
CNP901	1-564-321-00	PIN, CONNECTOR(3.96mm PITCH)2P			
* CNP902	1-565-792-11	PIN, CONNECTOR(3.96mm PITCH)2P			
		< DIODE >			
D951	8-719-911-19	DIODE 1SS133T-72			
D952	8-719-024-99	DIODE 11ES2-NTA2B			
D953	8-719-024-99	DIODE 11ES2-NTA2B			
D954	8-719-024-99	DIODE 11ES2-NTA2B			
D955	8-719-024-99	DIODE 11ES2-NTA2B			
D956	8-719-911-19	DIODE 1SS133T-72			
D957	8-719-911-19	DIODE 1SS133T-72			
		< FUSE HOLDER >			
FH901	1-533-293-11	FUSE HOLDER			
FH902	1-533-293-11	FUSE HOLDER			
		< TRANSISTOR >			
Q901	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q951	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
		< RESISTOR >			
R951	1-249-437-11	CARBON	47K	5%	1/4W
R952	1-249-425-11	CARBON	4.7K	5%	1/4W F
⚠R953	1-249-381-11	CARBON	1	5%	1/4W F
R954	1-249-437-11	CARBON	47K	5%	1/4W
R955	1-249-435-11	CARBON	33K	5%	1/4W
R956	1-249-429-11	CARBON	10K	5%	1/4W
		< RELAY >			
⚠RY901	1-755-298-11	RELAY			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
		< TRANSFORMER >			
⚠T902	1-435-435-11	TRANSFORMER, POWER			
**********					
	1-685-653-11	VIDEO BOARD			
		**********			
		< CAPACITOR >			
C201	1-124-261-00	ELECT	10uF	20%	50V
C202	1-124-261-00	ELECT	10uF	20%	50V
C203	1-124-261-00	ELECT	10uF	20%	50V
C204	1-128-805-11	CERAMIC	47PF	5%	50V
C205	1-128-805-11	CERAMIC	47PF	5%	50V
C206	1-127-888-11	CERAMIC	0.1uF	10%	50V
C207	1-119-941-91	ELECT	470uF	20%	6.3V
C208	1-127-888-11	CERAMIC	0.1uF	10%	50V
C209	1-119-941-91	ELECT	470uF	20%	6.3V
		< CONNECTOR >			
CN201	1-568-850-11	CONNECTOR, FFC 7P			
		< IC >			
IC201	8-759-333-84	IC NJM2279D			
		< JACK >			
J251	1-785-167-11	JACK, PIN 1P (MONITOR OUT)			
J252	1-785-167-11	JACK, PIN 1P (VIDEO OUT)			
J253	1-785-167-11	JACK, PIN 1P (VIDEO OUT)			
J254	1-785-167-11	JACK, PIN 1P (DVD IN)			
J255	1-785-167-11	JACK, PIN 1P (TV/SAT IN)			
		< COIL >			
L201	1-410-509-11	INDUCTOR	10uH		
L202	1-410-509-11	INDUCTOR	10uH		
		< RESISTOR >			
R201	1-247-804-11	CARBON	75	5%	1/4W
R202	1-247-804-11	CARBON	75	5%	1/4W
R203	1-247-804-11	CARBON	75	5%	1/4W
R204	1-247-804-11	CARBON	75	5%	1/4W
R205	1-247-804-11	CARBON	75	5%	1/4W
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Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
6	1-773-045-11	WIRE (FLAT TYPE) (17 CORE)	
⚠56	1-777-071-22	CORD, POWER	
58	1-773-106-11	WIRE (FLAT TYPE) (19 CORE)	
59	1-773-207-11	WIRE (FLAT TYPE) (25 CORE)	
60	1-769-904-11	WIRE (FLAT TYPE) (9 CORE)	
61	1-769-876-11	WIRE (FLAT TYPE) (7 CORE)	
66	1-765-325-11	WIRE (FLAT TYPE) (11 CORE)	
⚠F901	1-532-463-51	FUSE	
FAN901	1-763-561-22	FAN, D.C.	
⚠T901	1-437-862-11	TRANSFORMER, POWER	
TU901	1-693-580-21	TUNER	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.